Indian Wells
(760) 568-2611
Irvine
(949) 263-2600
Los Angeles
(213) 617-8100
Ontario
(909) 989-8584

BEST BEST & KRIEGER LLP
ATTORNEYS AT LAW

2000 Pennsylvania Avenue, N.W., Suite 5300, Washington, DC 20006
Phone: (202) 785-0600 | Fax: (202) 785-1234 | www.bbklaw.com

Riverside
(951) 686-1450
Sacramento
(916) 325-4000
San Diego
(619) 525-1300
Walnut Creek
(925) 977-3300

Gerard Lavery Lederer
(202) 370-5304
gerard.lederer@bbklaw.com

March 14, 2018

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street SW
Washington, D.C. 20554

Re: Promoting Wireless Broadband Deployment by Removing Barriers to Infrastructure Development - WT Docket No. 17-79;
Accelerating Broadband Deployment ("BDAC") -WC Docket No. 17-83

Dear Ms. Dortch:

The Honorable Brenda Bethune, Mayor of the City of Myrtle Beach, South Carolina ("City") and City Attorney Tom Ellenburg met by phone on March 14 with Commissioner Mignon Clyburn and Louis Peraertz, her Senior Legal Advisor for Wireless, International, and Public Safety. The purpose of the meeting was to review the City's efforts to accommodate the needs of wireless providers in the community's rights-of-way while preserving the community's character, which is its economic engine. Joining the Mayor by phone was Joseph Van Eaton, counsel to the City, and the undersigned, in a similar capacity, was present in the Commissioner's office.

The Mayor opened the meeting by sharing Myrtle Beach's desire to be a smart city, with the latest and best wireline and wireless connections for its residents and visitors alike. But in meeting residential and visitor communications needs, the city also sought to preserve the integrity of the community's look, which the City has invested over $110 million to achieve. The Mayor then shared a copy of the City's Request for Proposals For "Safe Harbor Designs for Wireless Deployment in the Rights of Way," a copy of which is attached to this letter.

Mayor Bethune and City Attorney Ellenburg explained the process that the City has employed to develop the "Safe Harbor" model. Highlights include:

- The City involved the industry in a summit, and engaged in a dialogue that has been productive and is currently on track to jointly address small cell deployment as a planning issue affecting all aspects of modern living.

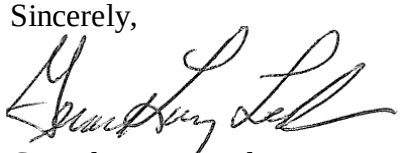
- Industry members, in collaboration with the City's consultants, have been helpful and actively engaged, and expressed that the non-adversarial approach the City has taken to the challenge of achieving small cell deployment has yielded productive insights.

- The City and industry members are approaching resolution to questions surrounding aesthetic goals, physical limitations which pose challenges that must be addressed (some Myrtle Beach rights-of-way are narrow – 5 feet wide or less — raising ADA issues, for example) while at the same time recognizing the community's need for this technology.

- This involvement, engagement, and cooperative process is very likely to result in a solid solution that is cost-effective for industry and expedient for all parties, ensuring everyone gets what they most need.

Mayor Bethune concluded the presentation by thanking Commissioner Clyburn for her leadership and expressing hope that the Myrtle Beach model could be replicated elsewhere. Those efforts will only be possible, however, if the Federal Communications Commission and state legislatures preserve the opportunity for such joint efforts, rather than mandating access to local rights-of-way, a step which leaves no room for meaningful collaboration. As the Mayor explained, developing "safe harbors" means industry obtains quicker approvals, with fewer boards and committees to go through. The expedited treatment is a result of the upfront investment by both local governments and industry, working together to find mutually agreeable solutions, developing essentially preapproved standards to which the industry can build.

Sincerely,



Gerard Lavery Lederer
of BEST BEST & KRIEGER LLP

cc: Louis Peraertz

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RFP No. 18-R0021 RFP Date: January 24th, 2018 RESPONSES DUE: February 27th, 2018

QUESTIONS/REQUESTS REGARDING THIS RFP SHOULD BE SUBMITTED BY: February 2nd, 2018 . (See Section 3.1)

DEVELOPMENT MODEL

REQUEST FOR PROPOSALS

FOR "SAFE HARBOR" DESIGNS FOR WIRELESS DEPLOYMENT IN THE RIGHTS OF WAY

Prepared for the

By:

VANTAGEPNT.com 605-995-1777
2211 N Minnesota Street Mitchell SD 57301

Contents

Attachments

1 Background

This Development Model Request For Proposals (RFP), is issued as the first step of a two-step approach that the City is taking to streamline deployment of densified wireless network on, over and under the Rights of Way (RoW) in Target Areas in the City. It does not replace existing ordinances governing placement of wireless facilities on and off the Rights of Way (RoW), but it is intended to help the City create "Safe Harbors" which will facilitate rapid placement of wireless facilities meeting approved designs in a manner consistent with community values. The approach is referred to as the City Multi-Provider Solution (CMPS) for Streamlined Wireless Deployment in the Rights of Way. The approach has been revised in light of industry comment, and is provided as Attachment B. Respondents are urged to review the CMPS for a full understanding of the nature of this RFP.

2 RFP Overview

2.1 Proposals Being Sought

With this RFP the City seeks generic designs for deployment of densified wireless network equipment on existing or replacement Poles in its RoW in the Target Areas shown on Attachment C. The City also is inviting designs for replacement or new Alternative Structures that could be placed in the RoW or on property adjoining the RoW without interfering with other RoW uses. For example, it may be possible to develop designs for replacement trash receptacles or bollards, or for new facilities near beach entrances that could provide helpful information to tourists, but which also can host and disguise wireless infrastructure. The City hopes to approve a design or set of designs based upon the RFP responses. Companies that wish to deploy wireless facilities in the RoW then will be able to take advantage of a streamlined approval process if they use the approved designs. Familiarity with existing structures in Myrtle Beach will be helpful to respondents.

The City reserves the right to choose to reject all designs proposed, and to terminate this RFP at any time. It also reserves the right to conduct its own independent review of wireless designs.

The issuance of this RFP does not prevent any entity from applying for authorization to place wireless facilities on or off the RoW following the procedures set out in the current City Code. The goal is to make deployment simpler.

The first Target Areas, for which this RFP is issued, are along Ocean Boulevard, where there appears to be significant interest in deployment of wireless facilities. If this initial RFP is successful, additional RFPs may be issued for other Target Areas.

2.1.1 Generic Designs

With the term "generic designs" the City desires to arrive, to the extent feasible, at one or possibly more uniform, Provider-agnostic, Safe Harbor designs for each Structure type for each Target Area addressed

by this RFP. The City therefore encourages equipment Housing and/or replacement Structure designs that can reasonably accommodate the equipment form factors now available to Providers. Respondents, in other words, are free to submit multiple designs, but should explain the benefits or detriments of each.

2.2 Priorities for Preliminary Selection

The City will review all designs and will select the most favored for each Structure type. Most favored designs generally will be judged from the following priorities:

(a) Implementation of Stealth, as defined in section 4;

(b) Most pleasing aesthetics;

(c) Minimization of physical scale;

(d) Level of required confidentiality (see section 3.4).

More particularly, the City will rank designs applying the following criteria:

- Is the design such that it can be technically implemented without unduly interfering with other uses of the RoW by the public, government agencies or other utilities?

- Is the design useable by any Wireless Carrier or Wireless Provider, or is the design proprietary to a Wireless Carrier or Wireless Provider? Could the design be implemented by other Wireless Carriers or Wireless Providers that may enter the market?

- Which design, considered on a network basis, best promotes the aesthetic goals of the RFP (consistency with existing infrastructure in the RFP Target Areas; minimization of visual impact; minimization of the impact on other uses of the RoW by the public, by government agencies and by the City)?

- Has the design been tested / has evidence been provided to show that that the structure meets electrical and other safety requirements?

- Has the design actually been implemented in the field? Has evidence been provided to support this?

The City does not intend to adopt any design that, as a practical matter, would create significant implementation issues (whether by blocking sidewalks, requiring significant relocation or reconstruction of existing utilities, and so on). It also does not intend to adopt a design which would prevent deployment and competition in the provision of wireless services, *e.g.,* by adopting a design that is only available to a single Wireless Provider. (However, if presented with a set of very similar designs by

different providers, the City could choose to approve multiple designs even if one may be available only to a single Wireless Provider).

2.3 Selected Designs To Be Circulated to Providers Prior to Safe Harbor

Prior to selecting any design, the City may conduct interviews with Respondents to the RFP, or ask Respondents to clarify certain aspects of the design.

The City intends to circulate chosen designs to Industry for an opportunity to review for compatibility with their contemplated densified network RoW installations. If a Provider would not be able to build to a selected design, it would be asked to explain why, and to provide the minimum aesthetically impacting alternative it feels is required to accommodate its necessary equipment. The City may then meet with the selected Respondent to determine whether the modifications, if otherwise acceptable to the City, can be implemented without undue delay. A final design would then be submitted to City Council for approval, and upon approval would become a Safe Harbor design for the Target Area for which it was approved.

We caution that even an application to use a Safe Harbor design will require certain other approvals prior to deployment. An applicant will need a franchise from the City, and a lease to use or replace the existing Structure. An application for a particular site also will require administrative review prior to placement at a particular site, for example, for safety purposes, to address particular conflicts with other utilities, or for any access/historical/environmental issues. However, we would expect this review to proceed very quickly.

3 Instructions to Respondents

Each Respondent's Proposal shall be submitted subject to, and should comply with the requirements of this Section and the General Conditions set forth in Attachment A.

3.1 Project Contacts

In order to provide for fair evaluation of the Proposals, contacts regarding this RFP should be limited to written procedural or substantive questions, which should be submitted to the Project Manager. Contact information for the Project Manager is as follows:

Warren VandeStadt
Vantage Point Solutions, Inc.
2211 N. Minnesota Street, Mitchell, SD 57301
DID: 605.995.1770
Fax: 605.995.1778
Warren.VandeStadt@Vantagepnt.com

Questions submitted and the City's responses to them may be publicly posted so that potential applicants have the benefits of the questions and answers.

Questions should be submitted by Friday, February 2nd, 2018. The City may respond to later-submitted questions if feasible, consistent with the deadlines for RFP submissions. Procedural requests (such as requests for extension of time) should be submitted no later than seven days before the due date and should explain why a procedural modification is required.

Potential respondents that wish to conduct a visual inspection of aboveground facilities in the Target Areas will be able to do so without contacting the City. However, if a potential respondent believes other physical inspections may be required to respond (*e.g.,* inspections involving access to poles or opening handholds to examine facilities in place), a physical inspection request should be submitted to the Project Manager as promptly as possible, describing the inspection desired.

3.2 Proposal Requirements

3.2.1 Proposal Submission Requirements

Respondents may provide their proposed designs in soft copy to the VPS Project Manager via e-mail. Soft copy files may be in MS Windows versions of MS Word, MS Excel, MS Visio, and/or in Adobe Acrobat, with images in any commonly used picture or movie file format. Should the respondent's Proposal exceed 20MB, the Proposal may be delivered to the VPS Project Manager on CD ROM, or you may contact the VPS Project Manager via email to request a link to a ShareFile folder to which to upload. See section 3.1 for VPS Project Manager delivery information. Proposals must include a Cover page setting out the name and number of this RFP and of the Respondent's company name, short form company name as it will be referred to in Design Proposal Checklists, contact name, address, telephone number and email address. The contact should be the person to whom questions about the design may be submitted. Each Proposal should include an Executive Summary briefly describing the design(s) proposed, the design Proposal(s) themselves signed by Respondent(s); and a signed copy of the General Conditions (Attachment A). Please review all instructions carefully; submissions may be rejected if incomplete.

3.2.2 Proposal Due Date

Proposals are requested to be delivered to the VPS Project Manager on or before close of business on Tuesday, February 27th, 2018. The City may extend this due date upon request.

3.2.3 Design Proposal Checklist

Please complete the Safe Harbor Design Proposal Checklist provided in Attachment E and place as a title page to each design submitted.

3.3 No Procurement or Contract

The intended benefit of this RFP is to facilitate streamlining of approvals that meet certain design standards, and to that end to define a design could be utilized by entities that wish to use the RoW in connection with the provision of personal wireless services. The RFP is not, however, for procurement of any product, service or intellectual property. It is anticipated that if a design is approved for replacement or modification of existing City or City-controlled Structures, additional contracts will be required by the City governing the use of those structures.

3.4 Confidentiality

So that selected designs may be circulated to Industry per section 2.3, and to facilitate ultimate adoption for publicly available Safe Harbor, Respondents are encouraged to limit confidentiality requirements where possible. Responses may be subject to public disclosure under the South Carolina Freedom of Information Act (FOIA) 2007. However, if certain portions of responses unavoidably must be made confidential, Respondents can and should mark those portions as confidential. The City will protect the confidentiality of information so marked as permitted under South Carolina law. It will, however disfavor a Proposal where the design proposed is subject to such restrictions that its adoption would effectively preclude use of the design, or an equivalent design, by others.

4 Definitions

Certain terms used throughout this document have specific meanings, as follows:

ADA	Americans with Disabilities Act, with which all proposed designs must comply. See www.ada.gov.
Addendum	A written change, addition, alteration, correction, or revision to a Proposal document.
Alternative Structure	Includes non-Pole street furniture such as kiosks, benches, bollards, street sign posts (not highway sign support poles – see Poles), and the like, upon which or with replacement of which deployment of densified wireless network equipment may be proposed.
Base Station	Equipment that enables FCC-licensed or authorized personal wireless service communications between user equipment and a Wireless Provider network, including baseband equipment, radio transceivers (RRUs), antennas, coaxial or fiber-optic cable, power supplies, and comparable or other associated equipment. Base Stations can operate on a fully stand-alone basis at transmitting locations, connecting directly to backhaul facilities to the Wireless Carrier broadband network, or, portions of them may be centralized and connected to remote RRUs at

	transmitting sites, typically via fiber-optic cable, microwave, or Carrier Ethernet.
Cabinet	Refers to ground-mounted cabinets containing Base Station equipment. Does not include and is not included in Housings.
City	The City of Myrtle Beach.
CMPS	City Multi-Provider Solution (CMPS) for Streamlined Wireless Deployment in the Rights of Way; including this Development Model RFP, any subsequent allocation processes, and all associated activities. The current CMPS is provided as Attachment B.
C-RAN	Centralized - Radio Access Network. A distributed Base Station configuration where RRUs at transmitting sites, which cannot operate on a stand- alone basis, are connected (or "fronthauled") typically via fiber-optic cable, to/from a Provider's centralized RF baseband or other processing equipment location that serves multiple RRUs, which in turn is connected ("backhauled") to the Provider's broadband network.
DAS	Distributed Antenna System, allows a representation of the final RF signal from a Provider's remote Base Station (or multiple Providers' remote Base Stations) to be transported to or distributed across one or more RRUs and transmitting locations, typically via fiber-optic cable.
Housing	A Pole-mounted enclosure or shroud employing Stealth, containing or concealing Base Station equipment. Does not include Cabinets.
Industry	Includes Wireless Carriers, Wireless Provider/Operators that are contracted to build out for one or more Wireless Carriers in Myrtle Beach, and, Vendors of Stealth physical infrastructure that supports Small Cells.
Neutral Host	A type of Wireless Provider/Operator, or its network, which permits multiple Wireless Carriers to share one RRU and antenna at a transmitting site for a given service or spectrum band, such as with a shared Base Station or shared DAS.
Respondent	Any vendor, proprietor, business, company, service provider, or corporation who submits a Proposal to the City in response to this RFP.
Pole	Includes existing or replacement street light poles (City-owned or City-controlled) or TSSPs, located in the RoW, upon which or with replacement of which location of densified wireless network equipment

	may be proposed to be located. Does not include Utility Poles or Alternative Structures.
Project Manager	Vantage Point Solutions, Inc. See section 3.1.
Proposal	The Respondent's collection of documents stemming from the RFP's general instructions, request for proposed designs and specification of information to be provided, which is to be used in preparing a complete response to this RFP, along with a signature page.
Provider	Includes Wireless Carriers and Wireless Provider/Operators.
RAN	Radio Access Network; includes the full wireless communication functionality from user equipment to the Provider's core network, including Base Stations and all associated fronthaul/backhaul, support and control equipment.
RF	Radio Frequency; as used herein, those final frequencies that propagate between Base Station antennas and user equipment.
RoW	City Right(s) of Way; whether singular or plural, means a public way for the purpose of vehicular and pedestrian travel, which by its nature may be used for, and which the City may permit the use for, placement of a Base Station.
RRU	Remote Radio Unit; the RF transmit/receive portion of a distributed Base Station. RRUs cannot stand alone and are connected (or "fronthauled") to/from the Provider's centralized RF baseband (C-RAN), remote full Base Station (DAS), or other processing equipment for user RF connection ultimately to/from the Provider's broadband network.
Small Cell	The term is used generically to refer to all Base Stations serving small geographic areas, regardless of architecture, including but not limited to stand-alone small cells, DAS and C-RAN.
Stealth	The minimization of the visual impact of a Base Station through incorporation of features or design elements that conceal its components such that they blend into the surrounding environment, or that disguise, shield or hide them or create the appearance that they are architectural components of the Structure to which they are attached, such that the presence of the Base Station is virtually invisible to the casual observer, with the Base Station and Structure placed and designed to fit into the surroundings.

Structure	A Pole or Alternative Structure.
TSSP	Traffic Signal/Sign Pole; includes poles that support traffic signals and/or highway signs on one or more cross-arms or cable strands that extend over one or more street lanes. Does not include street sign posts.
Utility Pole	A pole owned by a "utility" as defined in 47 USC Section 224 or a cooperative utility operating under South Carolina law, and which is located in the City's RoW. A Utility Pole is not a "Pole" as that term is used in this RFP.
Vendor	Manufacturer or supplier of Stealth physical infrastructure within or upon which Base Stations may be placed, such as street lights.
Wireless Carrier	A provider of personal wireless services as defined by 47 U.S.C. Section 332(c)(7).
Wireless Provider/Operator	An entity that is not itself a Wireless Carrier but that provides Base Stations for use by one or more Wireless Carriers.

5 Detail of Design Proposals Being Sought

5.1 Design Types

With this RFP the City wishes to entertain generic designs for deployment of Base Station equipment in its RoW in Target Areas, in three configurations: attachments to existing Poles, including dedicated streetlight Poles and TSSPs, replacement Poles, and replacement or new Alternative Structures. Designs should employ Stealth, with wiring and cables incorporated within the Poles or Alternative Structures where feasible. Otherwise, as in all cases, the City will prefer designs that best fit in with the existing infrastructure and area uses, and that do not interfere with pedestrian and vehicular traffic/access/sight lines. It may be, for an example, that a completely Stealth design (where all components, including meters, disconnects and other associated facilities are within a Structure) may require so much space, or be so bulky, that they are more intrusive considered in context than a small attachment above sight line on an existing pole, particularly where the meter or disconnect is below ground level.

While the City believes uniformity of design is important, it may approve one or more designs for any of the three configurations for a Target Area.

5.2 Design Scale

We observe that the term "small cell" today can refer to a large variety of deployment form factors for associated Base Station equipment: Some "small cells" are actually condensed and only somewhat

miniaturized macrocell Base Stations, while others such as DAS and C-RAN rely upon smaller, centralized/distributed Base Station form factors for densified network nodes. In attempting to establish Safe Harbors for streamlined approvals through this Development Model RFP, the City is not foreclosing any particular technology. However, it recognizes that some design scales or approved designs may be useable for some types of small cells, but not others. We welcome Proposals for any/all form factors and scales that are consistent with your contemplated RoW deployments for the Pole Type Groups[1] within the Target Areas addressed by this RFP (detailed in Attachment C) and the design goals of this RFP.

It also would be helpful for us to know what combination of form factors you believe are required to provide necessary coverage, and how different form factors might be accommodated consistent with the design goals of the RFP. We are aware, for example, that some Wireless Providers/Operators contend that 28 cubic feet may be required on a pole, while others claim service requirements can be accomodated by more numerous but smaller deployments, some as small as 13" x 9" x 4" using current technologies. It will be helpful to us to understand what alternative approaches we may have that result in minimization of overall impacts (for example, it may be possible that a "public art" design at a beach entrance in combination with several small form factors could reduce overall impacts on the community. To that end, we ask Providers to tell us what form factors you are actually deploying or are planning to deploy, and what combination of form factors you believe may make the most sense for each Target Area.

5.3 Preferred Design Attributes

The City requires designs that fit in within existing aesthetics that have been implemented within the Target Areas of this RFP, and will evaluate designs primarily based on how those facilities integrate with existing infrastructure (and whether the designs are feasible in light of other existing above ground or below ground equipment, facilities and structures.) The following are guidelines for design attributes that will score most highly in consideration for Safe Harbor (in no particular order):

(a) It is preferred that external appurtenances are not mounted to the davit or other decorative Structure supporting the luminaire. (Excludes TSSPs);

(b) If appurtenances must extend above the luminaire, it is preferred that they do not do so by more than five feet (5');

(c) It is preferred that Housings would be placed as high as possible without encroaching the luminaire or its support, targeting no lower than ten feet (10') clearance above street or sidewalk level;

(d) The elevation of any antennas or other radiating equipment should be no lower than ten feet (10') clearance above street or sidewalk level;

[1] The streetlight Pole Type Group number assigned to each Target Area is provided in Attachment C; TSSP Type Groups numbers are detailed in Attachment D.

(e) Designs, whether for attachments to existing Poles, for Replacement Poles, or for new or replacement Alternative Structures, should not interfere with pedestrian and vehicular traffic access and sight lines, and should comply with the ADA;

(f) All cabling should be concealed to the extent feasible, including connections to underground backhaul/fronthaul facilities and power utilities, or otherwise fit in with the existing infrastructure and area uses;

(g) The absence of fans or any other generation of unwanted noise is preferred for Pole-mounted or contained equipment;

(h) Unless otherwise desired by the City, proposed Housings or Structures should not be illuminated or emit light other than from the luminaire;

(i) Designs should not include any writing, symbols, logos or other graphic representations that would be visible from the street or sidewalk other than appropriate IDs for the Structure and signage required by State or Federal Law. Designs may include standard road signage (parking restrictions, etc.) as an option as part of a Stealth element where appropriate;

(j) Where replacement Poles are proposed, designs should provide for the luminaire or traffic signal or sign and its supporting member(s) from the Pole to mimic that of the Pole it is to replace. As for the Pole itself, although possibly aberrated in shape from the Pole it is to replace, it nonetheless will score most highly for Safe Harbor consideration if it mimics its exterior design and material appearance. An example might be a replacement Pole with portions of it shaped differently, but incorporating where feasible the same fluting, bases, etc. as the one it would replace;

(k) Replacement Poles should not exceed the height of the Pole it is to replace by more than five feet (5'), with luminaires, traffic signals or signs to be located at a similar elevation as on the Pole it is to replace;

(l) Where replacement Poles are proposed to contain the Base Station equipment internally rather than in Housings or attachments, it is preferred that the diameter of the proposed replacement Pole where housing the Base Station equipment be no more than approximately twice the diameter of the Pole it is to replace, assuming this can be accomplished without interfering with pedestrian and vehicular traffic/access/sight lines. This also applies to any radome portion near the top of a replacement Pole if antenna systems are to be contained internally, although a proposed replacement Pole design will score most highly for Safe Harbor consideration where the diameter of any radome portion can be kept to a minimum, if not otherwise disguised. It is preferred that the diameter of the remaining portion of the replacement Pole mast approximate the diameter of the Pole it is to replace;

(m) Where replacement Poles are proposed, it is preferred that space for utility connections and metering is disguised or provided for inside the Pole.

5.4 Required Design Details

For consideration for Safe Harbor, each design Proposal must include the following. Please provide a completed Checklist discussed in section 3.2.3 and provided in Attachment E as a cover page for each design submitted.

5.4.1 Providers Accommodated

Please state the number of Wireless Providers that your design will accommodate, and in what fashion, whether it be with owned Wireless Carrier equipment or by sharing of Wireless Provider/Operator equipment. Explain the advantages or disadvantages of the design in terms of the overall impact on the City of adopting it from a network perspective, given projected industry growth. The City has not decided that a design accommodating just one or multiple Providers should be favored or disfavored. Some entities suggest that designs accommodating multiple Provider should be adopted to reduce the number of facilities, while others claim it is infeasible because of interference that may result if two entities use the same location to provide personal wireless services using frequencies that are "close" to one another. As part of this response, we ask that Respondents explain the volume of deployment we can expect if one type of design is favored over another.

5.4.2 Aesthetics

Please describe in detail and provide drawings and one or more photo mockups, plus any other supporting visual aids you may wish to provide, which portray the aesthetics of your proposed design. Discuss the materials, surfaces, colors and textures to be employed to achieve Stealth as defined in section 4.

5.4.3 Physical Dimensions, Weight

Please state or provide drawings showing the dimensions of your design, including volume in cubic feet for Housings. Please also provide structural detail for your proposed design. For replacement Poles or Alternative Structures, please include proposed foundation detail. For proposed Housing designs, please state the maximum gross weight of the Housing with equipment. Weight should be no greater than that compatible with the capacity of the existing or replacement Pole to safely and securely support such equipment along with the luminaire loads.

5.4.4 Structural Viability

All designs, whether for Housings, replacement Poles, or Alternative Structures, should account for all physical loads and wind loads for Myrtle Beach, and should meet EIA/TIA 222-G or latest revision. So as to establish reasonable certainty of structural viability, the design should include a statement, preferably

an opinion letter from a Professional Engineer (P.E.), corroborating same, subject to reasonable caveats for the design being non-location-specific within Myrtle Beach. (Although not required at this time, if tentatively selected for a safe harbor design, additional statements of design compliance to other applicable standards, such as to, depending upon the application, AASHTO, ASCE and ASTM, may be required prior to any safe harbor adoption. Further, while a South Carolina P.E.-sealed certification is not required at this time, a final design for any location, when later submitted with an application for construction, will have to be sealed by a South Carolina registered Professional Engineer P.E. certifying structural integrity and compliance to applicable standards.)

5.4.5 RAN Accomodation Detail

Please show how your design, whether for Housings, a replacement Pole, or Alternative Structure, will envelop and conceal RAN, including antenna systems, RRUs, any baseband equipment, power supply and any other ancillary equipment.

5.4.5.1 Small Cell Technologies Accommodated

To aid in our understanding of Proposals and our selection of appropriate designs, we request that you identify what "small cell" technologies the Proposals you submit can accommodate. Please state the number and type of RAN equipment of stated dimensions and weight that the design will accommodate. By type of RAN equipment, we mean, please tell us if the intended technology to be accommodated is, for example, C-RAN, DAS, stand-alone cell – whether miniaturized macrocell (more typical of 4G-4.5G deployments) or stand-alone small cell (more typical of 5G deployments), or any other configuration technology. If a design is usable for only a single type of small cell technology (*e.g.,* C-RAN, DAS, etc.), please let us know that.

5.4.5.2 Ground-Mounted Cabinets

Please state whether the proposed design requires ground-mounted Cabinets; whether it requires them at the Pole or whether the cabinet can be placed at a different location; and if at a different location, where the Cabinet may be placed. Please describe separately any Stealth associated with the ground-mounted Cabinets. The design must clearly demonstrate whether the Cabinets can be located where not obstructing foot or vehicle traffic or sight distance, where they comply with the ADA, and where they are concealed to the extent possible.

5.4.5.3 Underground Vaults

Should some or all of your design include underground vaults, please detail. Please also designate same on the Safe Harbor Design Proposal Checklist (section 3.2.3). Please include a narrative of typical vault installation in/under concrete sidewalk or street in your detail, and compliance with the ADA.

5.4.5.4 Access Antenna Systems

Please explain what antenna systems for the common Wireless Carrier frequency band(s) your design will accommodate, including 600/700/850 MHz Cellular, 1.7-2.6 GHz PCS/AWS/Wi-Fi/BRS-EBS, 3.5(-4.2) GHz CBRS, 5GHz (Wi-Fi/LTE-U/LTE-LAA/LWA), and millimeter wave, and whether it can be modified (and how) to accommodate additional bands.

5.4.5.5 Wireless Transport

If any microwave, mesh radios, etc. are planned for wireless fronthaul/backhaul transport in lieu of fiber-optic or carrier Ethernet facilities, please show how your design will accommodate them including their antenna systems, while maintaining Stealth.

5.4.5.6 Cabling

Minimum cable exposure as possible is preferred, including RRU to antenna cabling, for which cabling entirely internal to a radome, shroud or Housing is preferred. Please show how power, coax, fiber or other signal cables will be hidden and routed up an existing or replacement Pole or Alternative Structure. Please include showings of how signal and power wiring is to be separated in conduit/chases. Note that separate power conduit/chases may be required if separate electrical services are required, for example, for metered RAN and an unmetered luminaire on the same Pole.

5.4.5.7 Utilities/Backhaul/Fronthaul Connectivity

Please show how your design will provide for connectivity to commercial power, to meter(s) if required; and to fiber or other transport termination equipment. It should be clear from the showing as to what components will and will not be visible, and where those components will be located.

5.4.6 Potential to Support Other Equipment Beneficial to City

For replacement Pole or Alternative Structure designs, please show how your design may accommodate or preclude uses by the City. (Examples might be City-Wi-Fi, printed or digital street and/or civic information signage, a music/announcement speaker, surveilance cameras or other proximity sensors, pedestrian counters, etc.) It should be clear from the design how much space would be available for City uses. (If none, state “None” on the Design Proposal Checklist.)

5.4.7 Electrical Safety Testing

For replacement Pole or Alternative Structure designs, please state what testing, if any, has been applied to determine that the structure meets electrical safety requirements. Please provide evidence and results of such testing. (If none, state “None” on the Design Proposal Checklist.)

5.4.8 Proven Use In Field

Please state to what extent your design actually has been implemented elsewhere, if any, and if so, please provide evidence of how and where. (If none, state "None" on the Design Proposal Checklist.)

5.4.9 Limitations on Placement

If a design is proposed for a particular location, or is intended for limited use, please describe the locations or limitations that would be appropriate for the design, in a manner that would permit the City to establish non-discriminatory conditions on the design. For example, if the design would only be appropriate where sidewalk widths/right of way widths exceed a certain size, that limitation should be mentioned; if it would only be appropriate in a median in the center of a roadway, that should be stated clearly.

5.5 Additional / Supporting Data

Please feel free to provide any additional supporting data you may wish to better characterize the design. If additional data is being provided, please designate so on the Design Proposal Checklist (section 3.2.3).

Attachment A – General Conditions

GENERAL CONDITIONS

1.0 PROPOSAL REJECTION:

1.01 Reasons for Rejection. The City of Myrtle Beach may reject a Proposal if:

A. The Respondent misstates or conceals any material fact in the Proposal; or if,
B. The Proposal does not strictly conform to the law or to the requirements of the Proposal; or if,
C. The Proposal is conditional, except that the Respondent may qualify his/her Proposal for acceptance by the City on an "all or none" basis.

1.02 Best Interest of City of Myrtle Beach. The City may consider all Proposals whenever it is deemed in the best interest of the City to do so, and may reject or seek further clarification of a Proposal after receipt. The City may make such investigation as it deems necessary to evaluate the Proposal, and the Respondent shall furnish to the City any requested information and data for this purpose at the Respondent's expense. The City reserves the right to reject any Proposal if the evidence fails to satisfy the City that the design can be implemented as proposed.

1.03 Disqualification. Any of the following factors will impact the City's consideration:

A. Evidence of either direct or indirect collusion among Respondents in regard to the terms, or conditions of the Proposal;
B. Attempts to improperly influence any member of the evaluation team;
C. Existence of any lawsuit, unresolved contractual claim, or dispute between the Respondent and the City; and/or default under any previous agreement with the City that resulted in the termination of the agreement.

2.0 CITY RESERVED RIGHTS:

2.01 Reserved Rights. The City of Myrtle Beach expressly reserves the following rights:

A. To reject any and/or all irregularities in the Proposals submitted;
B. To reject any and all Proposals, or parts thereof, as deemed in the best interest of the City;
C. To base the selection of a design with due regard to quality of services, experiences, compliance with specifications, and other such factors as may be necessary in the circumstances;
D. To make a selection of a design based on a Proposal that in the opinion of senior management, is in the best interest of the City;
E. To choose one or more designs from one or more Respondents, or to combine designs from Respondents to develop a design that is in the best interests of the City;

F. Only the evaluation factors specified in this RFP may be used as a basis for approval of a design pursuant to this RFP, but nothing herein prevents City from developing or approving designs by other means.

2.02 Final Judgment. If any doubt or difference of opinion arises between the City of Myrtle Beach and the Respondent as to the interpretation of this Request For Proposal, the decision of the City will be final and binding upon all parties.

2.03 Clarification. The City of Myrtle Beach reserves the right to obtain clarification on any point in the Respondent's Proposal. The failure of the Respondent to make additional information available could result in the rejection of the response. Such clarification might involve the delivery of demonstration equipment to the City for evaluation purposes. Such hardware shall be provided at no cost to the City. The City is not obliged to evaluate any or all products.

3.0 SIGNATURES:

3.01 Accuracy and Completeness. The authorized signer of the Proposal shall represent and warrant that they have been sufficiently informed in all matters relating to the specified products identified in the Proposal; and that they have checked their Proposal for errors and omissions.

3.02 Non-Collusion. The authorized signer of the Proposal certifies that the Proposal is made without collusion or fraud, and that they have not offered or received any kickbacks or inducements from any other Respondent, supplier, manufacturer, or subcontractor in connection with their Proposal. Furthermore, the authorized signer certifies that they have not conferred on any public employee having official responsibility for this RFP any payment, loan, subscription, advance, deposit of money, services, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged. Prior compensated consulting shall not preclude an Respondent from submitting a Proposal.

3.03 Compliance. By Signature below the Respondent affirms that they have examined, understands and accepts all instructions, specifications and conditions, and shall comply with the same and ensure all other legal requirements are satisfied.

_____

Signature of Respondent Date of Signing

_____

Print Name of Respondent

Attachment B – City Multi-Provider Solution (CMPS) for Streamlined Wireless Deployment in the Rights of Way

Report

Proposing a

CITY MULTI-PROVIDER SOLUTION (CMPS)

FOR STREAMLINED WIRELESS DEPLOYMENT

IN THE RIGHTS OF WAY

Prepared for the

By:

VantagePoint
EMPLOYEE OWNED

Revised December 5, 2017

Contents

1 Background

1.1 The Problem Being Addressed

As we understand it, the City has recognized that both commerce and quality of life are enhanced by the ubiquitous availability of wireless broadband communications, and that, as more and more people depend on wireless devices for basic communications service and for access to the Internet, there will be increasing demands placed on wireless networks. The City therefore wishes to reasonably accommodate providers of personal wireless services and infrastructure provider/operators (hereinafter "industry") in their provision of the latest in wireless broadband service to the City's residents, businesses, and especially, to its visitors. The City understands that industry generally intends to improve or enhance services through "densified" wireless networks – that is, networks that will require many more wireless facilities than are deployed today. These networks will use closely spaced deployments of "small cells" and similar systems that cover a much smaller area than more traditional "macro" towers.[1] For Myrtle Beach, the City understands that logical target areas for these deployments would be areas where there is dense foot traffic along the oceanfront, or, at other areas in the City that have been planned to attract visitors, new businesses and the public in general. The City further understands that while small cell deployment certainly could be accomplished in these areas using private property, industry has identified Rights of Way (RoW) as an advantageous venue for small cell deployment.

The City, however, has gone to considerable lengths and has expended millions of dollars to beautify major portions of these same areas, ("Target Areas"), where it has sought to promote development by, among other things, requiring placement of all utilities underground, and by developing aesthetic design standards for the areas. That investment and those efforts are placed at risk if wireless facilities of varying designs, sizes and conspicuousness are placed throughout these areas. In addition, adding new structures in the RoW can present significant risks to vehicular safety and to pedestrian access – both of which are critical to the City's economy.

1.2 The Current Process

The City recently adopted a revised wireless zoning ordinance that addresses placement of wireless facilities throughout the City. However, the current ordinance is tied to a "first come, first served," individual case basis model that is typical in most cities throughout the country. When an entity wishes to install a wireless facility or set of facilities, it submits an application with a design of its choosing, and that facility or facilities are reviewed on an individual case basis. At any given time, the City could have multiple applications from different providers, each proposing a slightly different design for the same

[1] There are various distributed architecture configurations of densified wireless network base stations, and not all pole-mounted wireless equipment necessarily fits the industry technical architecture definition of "small cell." However, the term is used in this document as a convenient means to refer to the transmitting locations for all such low-power, densified wireless network equipment.

part of the community. If, as expected, the number of applications increase, the City will be required to devote significantly more resources to reviewing applications. Simply providing scale limitations into which proposed installations must fit, regardless of their appearance, will not protect the City's economy and aesthetic needs. By contrast, if the City can establish clear design standards with industry input, it can create "safe harbors" that allow it to rapidly review and approve conforming applications. Installations may not need to be identical, but the closer installations are in design, the less likely the networks as a whole will have a negative impact – and it may simplify maintenance and restoration in the event of an emergency.

1.3 Steps Taken

The City has consulted with Vantage Point Solutions (VPS), which in turn, under legal review by outside counsel, Best, Best & Krieger, has consulted with industry itself, through an on-site forum with the City, Requests For Information (RFI), and through private interviews, to see if a plan could be developed that would make it easier for wireless providers to deploy in high-traffic areas, while protecting the City's interest in targeted areas. Based on those meetings, we have developed a proposed practice for selecting designs that could be pre-approved, and which could be deployed with minimal additional review (primarily engineering review only to ensure that no safety or similar hazards are created by proposed placements at particular locations). We also are proposing that the City develop a process for fairly allocating pole licenses for safe-harbor-compliant densified wireless network equipment deployment to multiple wireless providers within the RoW in Target Areas. Together, these compose the proposed City Multi-Provider Solution for Streamlined Wireless Deployment in the RoW (CMPS).

The CMPS seeks to create "safe harbors" for design and a process for obtaining rights to use approved designs in Target Areas. We anticipate that the proposed CMPS could be applied to other areas of the City over time, or that a similar process could be applied to new developments where utilities will be undergrounded. Indeed, the City may wish to encourage developers of new subdivisions to address placement of wireless facilities much as they do placement of other utilities.

Where implemented in the Target Areas, the CMPS would not replace the existing Code governing wireless placement, and entities could still file application for designs that are not selected through the CMPS process. However, it will be easier and faster to obtain approval where an application fits within the CMPS safe harbor.

1.4 Next Steps

If the City approves of the approach presented in this document, we recommend that it direct staff to prepare an RFP for Development Model design per the descriptions and minimum requirements set forth in this document, and to take the other steps set forth in this document that will be required to implement the plan.

2 Solution Executive Summary

2.1 Solution Focus

The plan focuses on use of the RoW for wireless deployment in targeted areas designated by the City where utilities are underground, and where there are special concerns with aesthetics, traffic, pedestrian and other uses that could be adversely affected by an exclusive "first come first served" individual case basis approach to deployment ("Target Areas"). Over time, a similar approach could be applied to additional areas that are not currently Target Areas. However, for now, for those areas, or areas that are within Target Areas on private property, placement of facilities would be controlled by the current City Code.

2.2 Solution Goal

The goal of the plan is to allow streamlined use of the RoW for placement of wireless facilities on existing or replacement poles or street furniture, or possibly on new street furniture, where these can be done while protecting legitimate public interests. To that end, the plan is intended to:

(a) Ensure uniformity of design within a particular area, consistent with the plans for the development of the area;

(b) Create a design standard that accounts for all parts of a wireless facility, (as used in this document, "facility" means the structure itself along with the antenna, equipment cabinets, connectivity to utilities, and so on), and thus allow for more rapid approval of applications that meet the approved design standard;

(c) Provide for periodic reviews of technology to ensure that form factor improvements that minimize the impacts on the public and property are supported;

(d) Set up a fair process for providing access to available, existing structures in Target Areas to qualified personal wireless service providers and providers of facilities used to provide personal wireless services, while preventing any one entity from monopolizing or warehousing scarce resources.

2.3 Solution Description

As currently planned, the CMPS would be composed generally of: (1) a Development Model RFP, and (2) an Application Process, for each Target Area or group of Target Areas as they are made available by the City. Industry responses to the Development Model RFP would form the basis for "safe harbor" design standards for densified wireless network equipment – that is, small cell wireless equipment intended to be deployed on street light, traffic signal, highway sign supporting, utility or other poles or structures in the RoW. Safe harbors are intended to streamline approvals. The Application Process then would

provide for fair allocation for licensing of available RoW structures and locations, on a first come first served basis, among qualified wireless providers proposing approved safe harbor designs.

(a) In order for this approach to be viable, we anticipate that wireless facilities would need to be accommodated on dedicated street light and traffic signal poles. Based on initial discussions with electric utility Santee Cooper, it is highly likely that the City will have to be willing to take ownership of the street light poles if it does not own them now, where a wireless provider wishes to place facilities on them. Thus, the plan is predicated on separate, prior Council authorization for and subsequent consummation of an agreement with Santee Cooper that accommodates transfer of title for allocated street light poles ultimately to the City.

(b) The City currently owns all traffic signal poles not in State DoT RoW, and all underground conduit in the Target Areas. We understand that the City shall continue to take ownership of new conduit as it is installed, in accordance with its current practices.

3 Proposed City Multi-Provider Solution (CMPS) for Streamlined Wireless Deployment in the RoW

3.1 Introduction

The City of Myrtle Beach (City) retained Vantage Point Solutions (VPS) to work with the City to develop a practice that would allow for rapid deployment of advanced, wireless infrastructure in the City Rights of Way (RoW), in an approach that is fair to all, but in a manner that would be consistent with community values. The proposed CMPS was developed after multiple meetings with representatives of the wireless industry, including wireless service providers as well as entities that build wireless infrastructure and lease that infrastructure to providers ("infrastructure provider/operators"). There was general agreement that taking a proactive approach to identify "safe harbors" for wireless facility deployment was a good idea. While some entities suggested that the City then allow installation of an approved design purely on a first-come, first served basis, others thought it appropriate to develop some sort of system for fairly allocating locations that are likely to be most desirable among the multiple wireless providers. The plan endeavors to accommodate both.

Please note: The City's outside counsel, Best, Best & Krieger, has reviewed the plan for consistency with federal law requirements as of this writing; however, those requirements are evolving and may affect this proposed practice.

3.2 Solution Steps

This Report recommends that the City approach deployment governance in Target Areas in two steps. The first step would be a Request For Proposals (RFP) for designs for wireless facilities that could be deployed in the RoW on existing or replacement structures, described further in section 3.2.1.1. The second step would be to develop an Application Process that will permit providers of personal wireless services or infrastructure who propose adopted safe harbor designs to "reserve" approved structure locations, in an approach that is fair to all, for placement of facilities in Target Area RoW.

3.2.1 The Development Model RFP

As the initial step, the City would issue a Development Model RFP seeking a design or designs satisfactory to the City that can be used for deployment of wireless facilities either using existing poles in the RoW as described in section 3.2.1.1.1, or replacing them (at the same locations), which could become "safe harbor" designs for construction applications. The RFP also would accept creative ideas submitted for approval for deployment of new or replacement, multi-purpose "street furniture" as described in section 3.2.1.1.2 on the RoW, or on public property that is not in the RoW, that can serve City development goals.

The Development Model RFP would be tendered to providers of personal wireless services and infrastructure provider/operators, as well as to manufacturers of "smart" street lights, traffic signals, or

street furniture alternatives, and would be advertised in accordance with normal City practices. The Development Model RFP would state streetscape physical limitations, and would invite solutions that minimize the visibility of the wireless infrastructure.

(a) Absence (or restriction) from participation in the Development Model RFP would not preclude a wireless provider from later applying for use of an existing pole or pole location using an approved design.

(b) We anticipate that different RFPs will be issued for different Target Areas or groupings of Target Areas. We anticipate that if the first RFP is successful, the remainder will be issued promptly.

3.2.1.1 Two Types of Structures

The Development Model RFP would seek proposals for two distinct types of structures:

3.2.1.1.1 Poles

The first type of structure would be what we refer to in this document as "poles," meaning City-owned or controlled street light poles, traffic signal poles, and highway sign support poles that support one or more cross-arms that extend over one or more street lanes (does not include street sign posts), upon which or with replacement of which, location of densified wireless network equipment may be proposed to be located. The term does not include utility poles. The Development Model RFP would seek proposals for designs for use of existing poles, or for replacement of those poles at the same location.

(a) To be clear, the poles that are the subject of the CMPS processes are all owned or controlled by the City.[2] Providers remain free at any time to apply for access to the RoW and to utility poles owned by others under the City Code.

3.2.1.1.2 Street Furniture, Alternative Structures

The Development Model RFP also would accept proposals for placement, or (better), replacement of "street furniture" in the RoW, or on property that the City may own off the RoW in the Target Areas, and that (as designed or as replaced) could provide a platform for wireless deployment. Examples of such street furniture, which we refer to as "alternative structures" in this document, might include, for example, wireless kiosks at key entry points to beach areas that permit visitors to obtain information about the City and its businesses, or perhaps small cell deployments disguised as beach pylons,

[2] In cases where electric utility Santee Cooper now owns the poles, we anticipate that replacement poles would be acquired and installed by the entity that reserves the existing pole, or the existing pole (if it can accommodate wireless consistent with selected designs) would be acquired by the entity who makes the reservation, with title being transferred to the City. Because the provision of street light services is so critical, the City is not willing to have street lights controlled by anyone but itself or Santee Cooper. We stress that if Santee Cooper wished to retain ownership of light pole structures, that desire could be easily accommodated. But we must speak in terms ultimately of City ownership of poles based on our understanding at the time of this report that Santee Cooper does not wish to own light poles used by wireless providers.

replacement sign supports, bollards, refuse containers, etc., placed at appropriate locations where they will not interfere with foot or vehicular traffic.

3.2.1.2 "Safe Harbor" Design Selection

The City would select one or more designs, or where feasible, a composite of the best attributes of submitted designs, for each existing pole type and alternative structure type (if any) in each Target Area made available by the RFP. Following their circulation to industry for review and input on compatibility with contemplated wireless network RoW installations, selected designs or composites of designs, as potentially modified, and subject to City Council approval, would become the safe harbor designs, which applicants, once franchised, may be able to utilize or replicate in order to obtain streamlined and potentially blanket approvals (subject to engineering review) for construction. The City should reserve the right to dictate which design may be used in particular parts of a Target Area. It will be critical, as part of this process, that the City have some guarantee that the design cannot be changed without its approval.

(a) An application for deployment of a wireless facility that meets the approved design criteria conceivably could be approved administratively, assuming the facility and installation comply with applicable structural, safety and other "civil" codes, except in special circumstances (for example, where installation would prevent use of the structure by the City or other government agencies, disrupt other utilities, conflict with the Americans with Disabilities Act (ADA), or harm historical structures or environmentally sensitive areas).

(b) The approach also assumes that the City will be able periodically to revisit the design standards, to take account of technological changes or changes in the marketplace (for example, provider consolidation; reduction in equipment sizes; increases in number of antennas required), so that approved safe harbor designs are workable for the industry, and so the minimization over time of the visual and other impacts that may be associated with placement of facilities in the RoW may be streamlined. To this end, we propose that any authorization for placement of facilities be for ten years.

3.2.2 The Application Process

As the second step, the CMPS Pole Application Process would begin. Once a design is adopted by the City for a Target Area, the City would establish a date under which it will first accept safe harbor applications for use of poles or alternative structures for that Target Area. The Application Process then would allow all qualified wireless providers or infrastructure provider/operators to apply for poles or alternative structures within each Target Area made available by the Development Model RFP, where the entity applying for the facility is proposing a safe harbor design, affirms that it has the capital and capacity to build out the facility within a year of application approval, and, in the case of a wireless infrastructure provider/operator, has a commitment from a wireless carrier that is willing to affirm to the City its commitment for using the wireless infrastructure provider/operator's facility (see section 3.2.2.2(a)).

(a) Generally, the application process (whether for poles or for alternative structures) would work on a first-come, first-served basis, with applications being treated as received at the same time if received on the same date.

(b) If conflicting, qualified requests for the same pole or same pole location are received on the same day, the City would enter into an agreement with the entity that agrees to provide the most benefits, as determined by the City, for the pole/pole location. We believe a market-based approach will result in the most efficient use of existing poles and pole locations.

(c) A similar process could apply to alternative structures, but there are likely to be far fewer locations where approved alternative structures can be placed. For example, if kiosks are proposed at bus stops, the number of kiosks will be limited by the number of stops. To encourage creative approaches to alternative structures, it is sensible (in the event of a conflict), first, to give a preference to a qualified entity if it proposed an acceptable alternative structure, and otherwise, to choose among applicants based on which provides the greatest benefit to the City.

(d) The submission of an application would not be enough to guarantee that a particular applicant would be entitled to occupy a particular location. A master franchise agreement would be required to be entered with the City if any facility is to be placed in the RoW, and a lease or similar agreement would be needed before any facility could be placed on a City-owned or controlled pole, alternative structure, or other City-controlled property. Fees for use of the RoW would be charged in accordance with South Carolina law, and fees for use of other City property would be set by agreement. In addition, an applicant would need to agree to cover all costs that may be incurred by the City in connection with the applicant's use of the facility.

(e) To discourage poles or street furniture lying fallow while there is competing industry interest in them:

    (1) There would be a one-time fee for each application for each pole or street furniture structure or location "reserved" through the application process.

    (2) Recurring fees for the above would begin to accrue when an applicant enters the lease agreement with the City for it.

    (3) There would be a time limit to enter into the agreements required before construction could proceed, and a time limit for completing construction (one year from application approval). The application would be rejected if the time limits were not satisfied, so that others could submit applications for the structure or location. These are discussed in section 4.3.4.3.

3.2.2.1 Limitations on Poles Available for Wireless Deployment

Availability of poles should be subject to the following limitations:

(a) Only poles described in section 3.2.1.1.1 should be licensed pursuant to this process in the Target Areas.

(b) Poles already in use or identified for use by the City's Public Safety Department for surveillance or City communications should be ineligible for licensing, unless it can be clearly shown that licensing of those poles will not interfere with that use (as might be the case, *e.g.,* if an approved design can accommodate multiple uses). As part of the design review process, the City will be considering, among other things, whether the design will accommodate both personal wireless service uses and uses by government agencies. It may limit the number of poles it makes available to ensure that there is adequate infrastructure available for public uses.

3.2.2.2 Limitations on Applications

(a) The City could take steps to prevent applicants from "gaming" the first come first served process or adding to its costs, by requiring each application to be signed by at least one wireless provider, and limiting each wireless provider to one application per pole/location or alternative structure/location. This would ensure that the City does not receive multiple applications for the same wireless provider for a single pole or alternative structure location, for example, from the wireless provider itself as well as from one or more of its contractors or infrastructure providers.

(b) Consistent with the current Zoning Ordinance, no purely speculative wireless facilities or wireless support structures should be permitted.[3]

3.3 Neutral Host Not Precluded

Should the licensee, whether the wireless carrier itself or a wireless infrastructure provider/operator contracted to it for build-out, wish to offer neutral host service to additional providers for a given pole/alternative structure, it should be permitted to do so, but the licensee should be the only entity authorized to perform work on the pole/alternative structure, and should be responsible for maintaining all the elements of the wireless facility. A sub-licensee should be required to enter an independent franchise agreement or other arrangement satisfactory to the City that would ensure that sub-licensees have joint liability for facilities owned in the RoW, but which would give the sub-licensee no rights against the City (so that, for example, if the facilities must be moved to accommodate street improvements, the City could move them as provided in the license and without contacting sub-licensees).

3.4 What the CMPS Does Not Affect

[3] City of Myrtle Beach Code of Ordinances, Appendix A – Zoning, (accessible at http://cityofmyrtlebeach.com/zoning.html, Article 1311.5.b)

(a) A provider of wireless services or wireless infrastructure/operator may always submit applications under the City Code, and among other things, would remain free to submit applications for placement of wireless facilities on private property outside the RoW, or on public property outside the Target Areas. Proposals for placement on private property would be considered in light of the City's Code governing placement of wireless facilities. Placement on public property generally would be a matter of City discretion.

(b) The proposed CMPS does not affect allocation of utility poles for wireless facilities. Allocation of utility poles for wireless provider use is controlled by the utility owning the poles. However, installations on utility poles are subject to the City's Code, and if the poles are in the RoW, would require a franchise agreement with the City.

4 The CMPS Procedure

4.1 Preparation

While it would be the responsibility of any entity that responds to a Development Model RFP or that participates in an Application Process to conduct its own review of street poles, traffic signal poles and street furniture, the City should continue its preliminary steps to develop information that will move the process forward. Although the information that is finally developed may vary, the goals for information development are described below:

(a) The City should define its Target Areas geographically, utilizing coordinate-based GIS shapefiles, suitable for sharing with industry electronically. The general location of all current Target Areas is available as a Google Earth file from VPS, and can be made available to industry upon request.

(b) The City should develop the order in which Target Areas will be made available for Development Model RFPs and subsequent Application Processes, assuming safe harbor designs will be adopted for each.

(c) The City should inventory all of the available poles in each Target Area, and should photo-document the various pole types. The City should prepare the inventory of pole types and their locations for each Target Area in a manner suitable for sharing with industry electronically. (Street furniture is too numerous and varied in nature, and attempting to judge usefulness or desirability of all of them ahead of time would be impracticable. Designs for alternative structures should be evaluated on an individual case basis as applications for them are received.)

(d) The City should determine the poles that are already in use or identified for use by the City's Public Safety Department for surveillance and City communications, and should document same geographically so that they may be subtracted from or clearly delineated in the electronic available pole location documentation of (c) above.

(e) The City should compile documentation of each available pole type for the Target Area(s), to include detailed design/construction drawings to the extent available from the original owners or vendors, and should prepare same to be made available to industry electronically. This would include street light poles as well as traffic signal poles and highway sign supporting poles owned (or scheduled to be owned) by the City.

(f) The City should compile detailed documentation of City-owned conduit in the Target Area RoW, including routes and the current user and type of use for each, and prepare it for sharing with industry electronically, in a manner that can be cross-referenced with available pole locations.

(g) The City should engage its consulting subject matter professionals to define reasonable and customary rental rates per appropriate parameters for unit of distance, diameter, type of use, cable quantity, etc., for use of City-owned underground conduit. We recognize that the fees

that may be charged for use of the rights of way themselves are specified in South Carolina law, and would not be addressed by this review.

(h) Assuming electric utility Santee Cooper is not in a position to manage wireless attachment to light poles it owns, then under separate authorization, the City should reach an agreement with Santee Cooper as to treatment of Santee Cooper owned light poles, so that if a pole location is "reserved," that pole may either be replaced or ownership of it transferred so that the City owns the pole. We anticipate that such an agreement should address at the minimum the contemplated Target Areas and chronology for pole replacement or title transfer, continuing pole and lighting maintenance under contract with Santee Cooper, E911 responsibility, how lighting is to be powered (preferably unmetered) on what will become non-Santee-Cooper-owned (City-owned) poles, and powering for franchisee wireless equipment.

4.2 Step 1: Development Model RFP

The first step of the CMPS is the formal RFP for development models for each of the various pole types found in Target Areas being made available by the RFP. Industry responses to the Development Model RFP would form the basis for safe harbor design standards for deployment of wireless network equipment on poles in the RoW, as well as on any street furniture contemplated by respondents ("alternative structures," as discussed in section 4.2.2), and is intended to streamline approvals. The proposed requirements and process for the Development Model RFP are described in the sections that follow.

4.2.1 For Poles:

(a) The City would tender a Development Model RFP for a Target Area or group of Target Areas. The Development Model RFP would specify that the City is seeking designs that will support placement of wireless facilities for use in the provision of personal wireless services as well as current uses of the structure. We anticipate that the RFP would be provided to all entities represented at the City's November 16, 2016 Industry Technical Session, and may also be provided to others, such as manufacturers of street lights and traffic signals that support wireless facilities. The Development Model RFP would be advertised in accordance with the City's ordinary procedures.

(b) The Development Model RFP should make the documentation prescribed in Section 4.1 available electronically to the invited wireless providers upon request.

(c) The Development Model RFP should state streetscape physical limitations within which proposed solutions must comply, and should invite multiple solutions based upon the pole types documented for the Target Area, as well as solutions that involve proposals for placement of alternative structures in the rights of way or on public property off the rights of way in the Target Areas.

(d) So as to establish reasonable certainty of structural viability of a design submitted for aesthetic safe harbor consideration, the Development Model RFP should require each design submitted for (c) above to include a letter from a Professional Engineer (P.E.) stating the likely ability of the generic attachment design and of the existing or proposed replacement pole supporting it to meet or exceed structural integrity requirements for Myrtle Beach per EIA/TIA-222-G or then-current revision, subject to reasonable caveats for the design being non-location-specific.[4]

(e) Designs should detail any associated vaults, ground-mounted cabinets or equipment required, if any, as well as anticipated connection methods at the pole to utilities for power and backhaul.

(f) The City would select designs, or where feasible, a composite of the best attributes of submitted designs, for potential safe harbor adoption. In considering competing designs, the City would also consider (1) whether the structure can support communications/monitoring uses for government and public safety purposes; (2) whether there are other communications uses (Community Wi-Fi, for example) that can be supported in the future.

(g) The City should circulate the chosen designs to industry for an opportunity to review for compatibility with their contemplated wireless network RoW installations. If a provider would not be able to build to a selected design, it would be asked to explain why, and to provide the minimum aesthetically impacting alternative it feels is required to accommodate its necessary equipment.

(h) Designs or composites of designs selected in (f) above, modified per (g) above if needed and reasonably possible, would be submitted to City Council for aesthetic review, and upon subsequent approval, would become aesthetic safe harbor designs.

4.2.2 For Street Furniture Alternative Structures:

The Development Model RFP also would accept safe harbor designs for alternative structures (non-pole "street furniture"), such as for attachments to or replacement of existing beach pylons, kiosks, benches, bus stops, bollards, and the like. Structures that could serve as information hubs at logical locations (entrances to the beach and the like), should also be considered. Such proposed alternative structures must not interfere with pedestrian or vehicular traffic or conflict with the ADA, and also should require a certification similar to that described in section 4.2.1(d). See also section 4.2.3(b).

4.2.3 Design Limitations

(a) Any pole or alternative structure design may propose complete replacement of the existing structure(s) at the same location(s). However, title to any replacement pole or alternative

[4] Even though they may meet aesthetic safe harbor parameters, final designs for each location, when later submitted by a franchisee in a perfecting an application for construction, should be sealed by a South Carolina registered Professional Engineer (P.E.) certifying structural integrity for Myrtle Beach per EIA/TIA-222-G or then-current revision for that specific location. See section 4.3.4.3(c)(1).

structure ultimately constructed by a licensee should transfer to the City, and would not reduce the franchise or lease amount (discussed further in section 4.3.3).

(b) Proposals for completely new pole locations in the RoW would not be not included under the proposed CMPS, as the goal of the CMPS, as discussed in section 2.2, is to streamline the use of what exists. As has always been the case, however, any party that wishes to submit an application for occupation of the public RoW may still do so under the City's existing law, and it will receive due consideration according to the timeline established by federal and local law. The City would entertain creative designs for alternative structures at new locations in the RoW and off the RoW under the CMPS, but it is anticipated that any such proposed structures would need to employ stealth to conceal the wireless facilities, and would need to be appropriately designed to serve a function (beyond providing support for wireless facilities) that is consistent with the area and not served by existing facilities. (Kiosks, for example, could provide information useful to tourists and disguise wireless facilities).

4.3 Step 2: Application Process

The second step of the CMPS is the Application Process. The recommended requirements and processes for the Application Process are described above and in the sections that follow.

4.3.1 Application Process Eligibility

Absence or restriction from participation in the Development Model RFP would not preclude an entity from participating in the Application Process. To be eligible to apply to use poles or street furniture locations, (*i.e.,* an "eligible entity"), it is recommended that an entity must (a) be a personal wireless service provider[5] or infrastructure provider/operator for the same; (b) meet the requirements of section 3.2.2; (c) either have or agree to enter into a non-exclusive franchise agreement with the City; and (d) agree to enter into an appropriate license or lease with City. Infrastructure provider/operators would have to show that they have an agreement for use of the facility applied for – that is, the application cannot be simply speculative.

4.3.2 Requirement to Cover Application Costs Anticipated

Upon opening pole locations for application in a Target Area, we expect that the City will require any entity seeking to "reserve" a facility to post an amount the City determines is necessary to cover the costs of the Pole Application Process, which could be in two parts: (a) a base fee for every application (whether qualified or not); and (b) a supplemental fee for the qualified entity or entities to allow the application to move forward to a final set of agreements and authorizations for use of the poles.

[5] Personal wireless services is used as the term is used in 47 U.S.C. 332(c)(7)(C)(i) and includes commercial mobile services, unlicensed wireless services and common carrier wireless exchange access services as those terms are defined under federal law.

4.3.3 Master Lease / Licenses

We expect that the City will develop a master lease for the use of poles or street furniture locations, the terms of which generally would only be modified where clearly inappropriate given the nature of a proposed deployment. An addendum to the lease would be entered into for licensing of each location that an entity has successfully applied for, covering the conditions for that particular deployment. We anticipate that if the master lease is approved by the City, an official of the City may be authorized to enter into the agreement and the addendum with any entity that reserves a location and has agreed to install wireless equipment with a safe harbor design at that location. As part of the master lease and/or license agreement, the City would:

(a) For poles, in addition to specifying the terms of use and maintenance, address where necessary the acquisition of the pole from Santee Cooper, or the replacement of the existing pole with a pole acceptable to the City (with title to the pole in all cases expected to be provided to or remain with the City);

(b) Set a minimum recurring fee for the per-pole or alternative structure license;

(1) The City, in its discretion, could accept higher fees or benefit to the City proposed per section 4.3.4.2(e) by an entity reserving a structure, in cash or in kind, which fees or benefit would be due and owing on the effective date of agreement authorizing use of the structure;

(c) Require the licensee to cover all costs associated with its use of any structure location, including additional costs that the City may be required to bear in connection with the license, such as additional maintenance and repair costs;

(d) Require a forfeiture fee that would be due and owing if build-out for any location licensed did not occur within one year of construction application approval;

(e) Require restoration to original condition, at licensee's expense, upon license termination, abandonment of the facility, or if the wireless facility is no longer being used;

(f) Provide that an application would be denied if the City and an applicant were unable to agree to terms within a reasonable period of time. Once terms are agreed upon, the fees would run from the date of the agreement, without regard to whether the build is completed. This, along with the build timeline, is intended to deter submission of applications to prevent others from entering the market, and to prevent undue burden on staff time.

4.3.3.1 Standard Term of License; Termination

(a) Each license would be for a base term of ten years.

(b) Each license would be non-exclusive, subject to the design limitations.

4.3.4 Application Procedure

Once a safe harbor design is approved for a Target Area, the City would establish a "first date" for receiving CMPS applications for the area. We anticipate that the application date would be about 30 days after the adoption of a design.

4.3.4.1 Information Provided by the City

At the same time it opens a Target Area for filing of CMPS applications, the City also should identify eligible pole locations within the Target Area, and what approved designs may be used in what portions of the Target Area (if some designs are appropriate for some locations, but not for others). (Per section 4.1(c), street furniture designs may be approved on a site specific basis.)

4.3.4.2 Application Showings Requirements

Requirements for showings for application requests should include, for each pole reservation requested:

(a) The approved safe harbor design that the requestor proposes to follow, without which the reservation request will be disqualified;

(b) A showing of the extent of proposed use of existing City-owned fiber and power conduits, and the amount of underground construction required to avail them;

(c) Proposed physical connection methods at the pole to utilities for power and backhaul (*e.g.,* connection within a pole handhole, external disconnect, etc.);

(d) Demonstration of valid FCC licensing or other FCC authorization covering the City-licensed structure location;

(e) A statement of compliance with FCC maximum RF Exposure limits;

(f) A statement of the maximum amount it will pay for lease/license of the reserved pole, which may be the minimum amount specified by the City for a ten year base term, but may also include a higher amount that the applicant is willing to pay in the event multiple applications are received for the same pole; and/or other benefit to the City in cash or in kind, as discussed in section 3.2.2.2(a).

The City should reserve the right to deny or condition a license where it appears that the proposed safe harbor design is not appropriate at the location proposed, the applicant is unwilling to agree to an appropriate safe harbor design, the design will create a safety hazard, interfere with the reasonable flow of pedestrian or vehicular traffic, the proposed deployment will require unduly disruptive or unnecessary construction, interfere with other utilities or governmental activities (traffic control and public safety monitoring, including plans for the same), will require installation of ancillary facilities

inconsistent with the approved design, will have a substantial adverse effect on the environment or an area that is historically preserved, or, where there is a conflicting request that in the City's sole discretion is superior. The City could, for example, deny a reservation request that requires installation of new conduit where existing conduit could be used.

4.3.4.3 Timing, Milestones

In order to prevent "stockpiling" applications, the City should establish time limits for action on applications, and an application should be denied in writing if the deadlines/conditions are not met:

(a) Applications must be complete, and must be accompanied by all required fees.

(b) Within 60 days of notice from the City that it will consider the application, the applicant must agree to the terms of a master lease agreement with the City, and a franchise if required. All fees set forth for the master lease/licenses per section 4.3.3 would be due and owing upon execution of that agreement for each pole or alternative structure or location.

(c) Within 30 days of the completion of the agreements, (or for an applicant who already has the franchise and master lease, the date of notice from the City that the City will consider the application), final designs for each proposed installation must be submitted in appropriate forms for obtaining required permits. These should include at the minimum:

    (1) A statement sealed by a South Carolina registered P.E. certifying structural integrity of the proposed construction for Myrtle Beach per EIA/TIA-222-G or then-current revision for that specific location;

    (2) Detail of how the proposed construction will meet limitations on ground-mounted cabinets or equipment and other streetscape limitations;

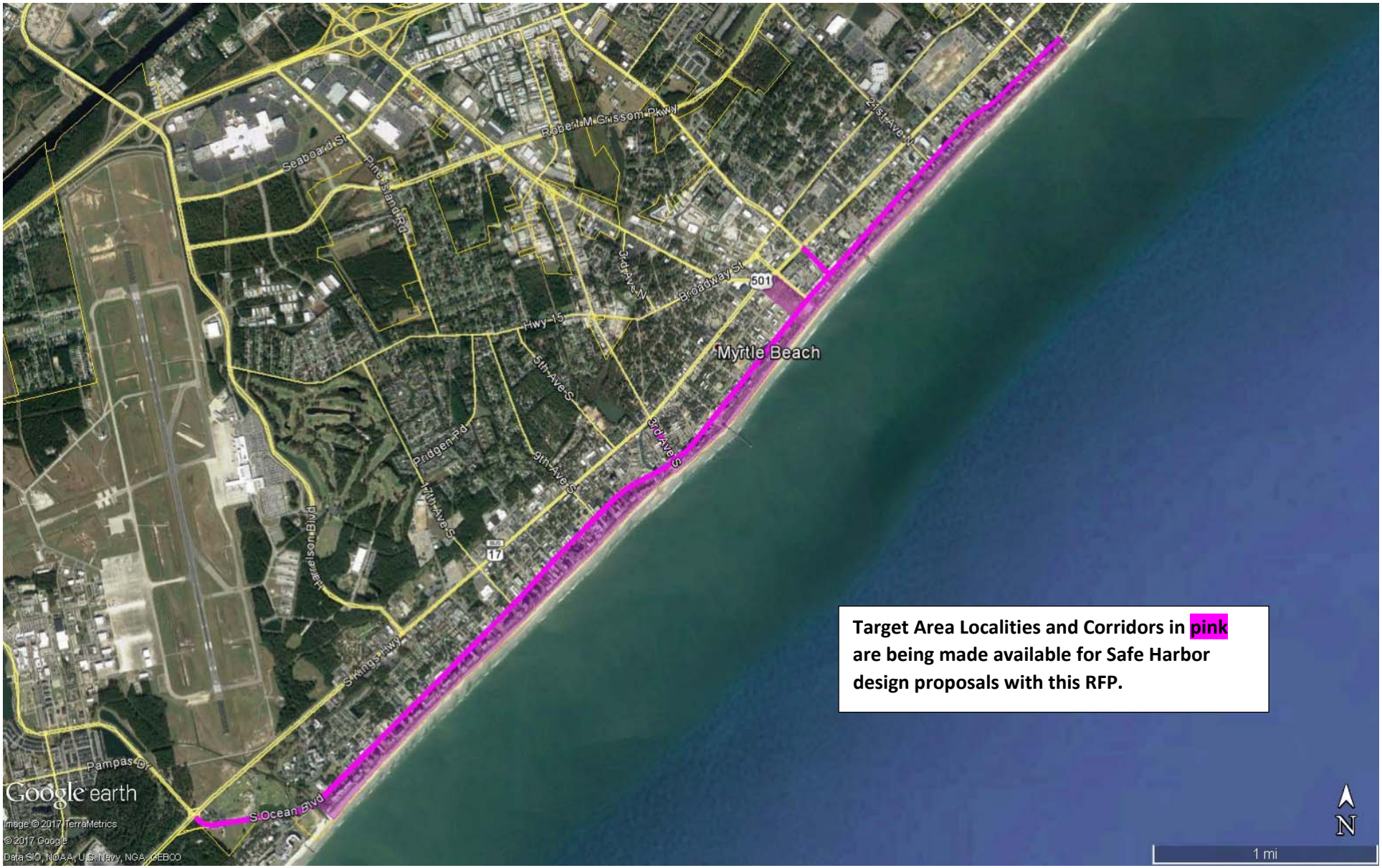
    (3) A South Carolina DOT Encroachment Permit and/or other permits required by applicable laws (other than permits that cannot be issued until City approvals are received);

    (4) Installation Method of Procedure (MOP) for the proposed design.

(d) The franchisee should be required to complete construction on/at reserved structure locations within one year of construction permit application approval by the City.

Attachment C – Myrtle Beach RFP Target Areas and Pole Type Index

Myrtle Beach RFP Target Areas and Pole Type Index



Myrtle Beach RFP Target Areas and Pole Type Index

There are two types of Myrtle Beach Target Areas: Localities and Corridors. A Locality is an area defined by a geographic periphery, while a Corridor is a thoroughfare defined by its road RoW. While Localities may contain some street RoWs, they do not contain any Corridor RoWs, to which they may be adjacent. Corridor RoWs do not overlap Localities that may be adjacent to either side of them. The Target Areas addressed by this RFP, brief descriptions of each, and an Index to their predominant streetlight Type Groups are listed below. Information and documentation for the Luminaire and Pole Types listed below are provided in Attachment D. Attachment D also contains locations and documentation for the TSSP Type Groups found in the Target Areas below.

Geographic representations of the Target Areas are provided in the Google Earth file: CMB Target Areas for 1st Dev Model RFP (Atmt-C).kmz.

Localities

LOCALITY **Target Area Name** ***(NOTE: These Localities are outboard of, and do NOT include, the Ocean Blvd RoW)***	**Description**	**Typical Streetlight Luminaire, Pole Types**	**Luminaire Designation per Google Earth map**	**Street-light Type Group No.**
Oceanfront, 28S-6S	Resorts & attractions, ocean to S Ocean Blvd, 28 Ave S to 6th Ave S	HPS Roadway, Tapered Aluminum	400 HPS Roadway	L-1
Oceanfront, 6S-1N	Resorts & attractions, ocean to S Ocean Blvd, 6th Ave S to 1st Ave N	HPS Roadway, Wood	250 HPS Roadway	n/a
Oceanfront, 1N-8N	Resorts & attractions, ocean to N Ocean Blvd, 1st Ave N to 8th Ave N; includes MB Boardwalk & Promenade	Heritage Teardrop (Sag Glass, Deep Skirt) & Davit, Atlantic	150 PMH Teardrop	L-3
Oceanfront, 8N-9N, Old Pavilion Property	Vacant oceanfront property between ocean (flagpoles) to N Ocean Blvd, and from N Ocean Blvd to N Kings Hwy/Main St, between 8th & 9th Ave N (area includes N Ocean Blvd RoW); includes MB Boardwalk & Promenade	Heritage Teardrop (Sag Glass, Deep Skirt) & Davit, Atlantic	150 PMH Teardrop	L-3
Oceanfront, 9N-14N	Resorts & attractions, ocean to N Ocean Blvd, 9th Ave N to 14th Ave N; includes MB Boardwalk & Promenade	Heritage Teardrop (Sag Glass, Deep Skirt) & Davit, Atlantic	150 PMH Teardrop	L-3
Oceanfront, 14N-31N	Resorts & attractions, ocean to N Ocean Blvd to 14th Ave N to 31st Ave N	Heritage Teardrop & Davit, Long Bay	400 MH Teardrop	L-2

Corridors

CORRIDOR Target Area Name	Description	Typical Streetlight Luminaire, Pole Types	Luminaire Designation (per Google Earth map)	Street-light Type Group No.
3rdAveS, OceanBlvd-KingsHwy	Inland corridor to US501 from Ocean Blvd	Heritage Teardrop & Davit, Long Bay	400 PMH Teardrop	L-2
MrJoeWhiteAve, OceanBlvd-KingsHwy	A central corridor inland from Ocean Blvd; retail 2-lane	Heritage Teardrop & Davit, Long Bay	400 MH Teardrop	L-2
OceanBlvd, Farrow-6S	Primary E-W corridor by oceanfront resorts	HPS Roadway, Tapered Aluminum	400 HPS Roadway	L-1
OceanBlvd, 6S-31N	Primary E-W corridor by oceanfront resorts (Note: From 2N to 8N, conversion is in progress from HPS Roadway on Wood to Heritage)	Heritage Teardrop on Davit, Long Bay	400 MH Teardrop	L-2

RFP No. 18-R0021

Attachment D – Existing Pole and Luminaire Information and Documentation

Existing Pole and Luminaire Information and Documentation

for Myrtle Beach Initial RFP Target Areas

The following pages provide information and documentation of existing pole types, luminaires and TSSPs referenced in the Myrtle Beach RFP Target Areas and Pole Type Index (RFP Attachment C). (Streetlight Type Group Numbers are listed in Attachment C for each Target Area. TSSP Type Group Numbers are provided below.)

Contents

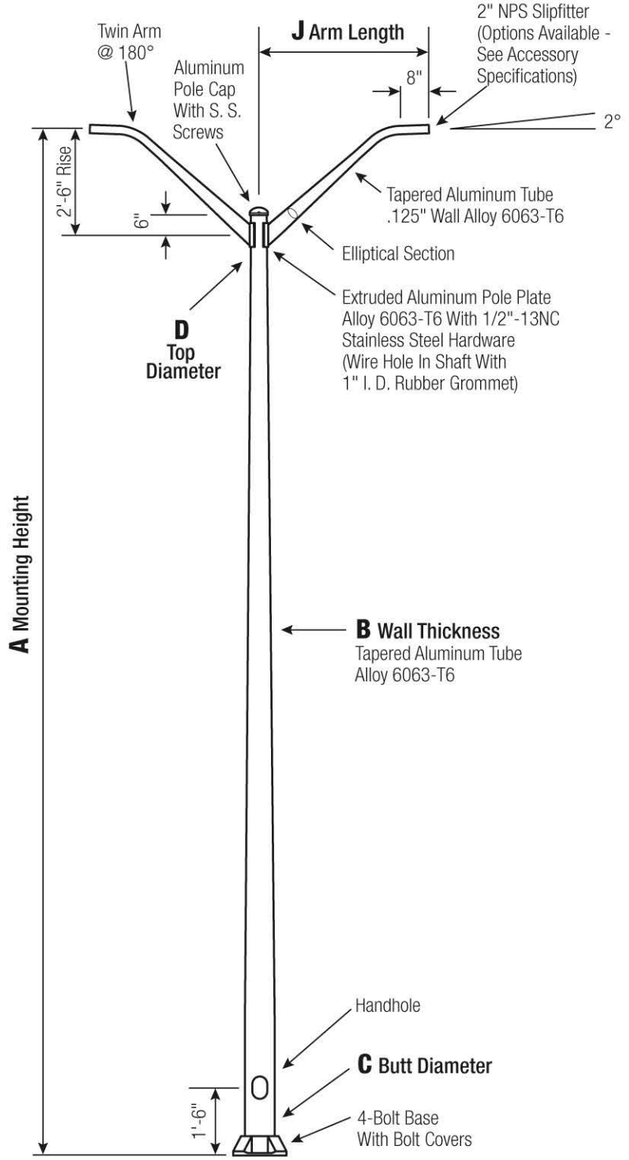
Pole Types

Tapered Aluminum (Hapco)

Example Photo, with HPS Roadway Luminaire (Streetlight Type Group L-1)

RTA

Round Tapered Aluminum Pole with Arms
Double Mast — 4-Bolt Base



Satin Aluminum or Powder Coated Finish per Customer Specification.

C Butt Dia.	D Top Dia.	F Bolt Cir. Dia.	G Base Sq.	H Bolt Proj.	I Bolt Size
6	4.5	9 - 10	9.75	2.75	1 x 36 x 4
7	4.5	10 - 11	10.5	2.75	1 x 36 x 4
8	4.5	11 - 12	11.25	2.75	1 x 36 x 4
10	6	14 - 15	14	3.25	1 x 48 x 4

Dimensions in Inches

Pole

Shaft and arms will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Style

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

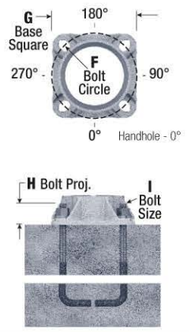
Handhole

6" Butt Diameter - *Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.*

7"+ Butt Diameters - *Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.*

Anchorage

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.



Vibration Damper

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

A Mtg. Hgt.	B Wall Thickness	C Butt Diameter	J Arm Length	Lum. Weight	Maximum EPA Per Arm 90	100	110	120	130	Old Cat. Number	Catalog Number
20	0.156''	6	4'	55	5.6	4.0	3.6	2.6	2.0	22-082	RTA20C6B4M24-**
20	0.156''	6	6'	45	5.8	4.0	3.4	2.3	1.5	22-085	RTA20C6B4M26-**
20	0.156''	6	8'	55	5.6	3.6	3.2	2.1	1.4	22-087	RTA20C6B4M28-**
20	0.188''	6	4'	55	5.0	3.4	3.0	2.1	1.4	22-002	RTA20D6B4M24-**
20	0.188''	6	6'	60	7.8	5.6	5.0	3.7	2.8	22-005	RTA20D6B4M26-**
20	0.188''	6	8'	55	7.0	4.8	4.2	3.0	2.1	22-007	RTA20D6B4M28-**
20	0.156''	7	6'	60	8.4	6.2	5.7	4.4	3.4	22-095	RTA20C7B4M26-**
20	0.156''	7	8'	70	7.6	5.4	4.8	3.6	2.7	22-097	RTA20C7B4M28-**
20	0.188''	7	6'	60	8.6	6.8	6.2	5.3	4.1	22-015	RTA20D7B4M26-**
20	0.188''	7	8'	45	5.8	4.1	3.6	2.3	1.4	22-017	RTA20D7B4M28-**
25	0.156''	6	4'	45	4.2	2.7	2.2	1.3	-	22-412	RTA25C6B4M24-**
25	0.188''	6	4'	40	5.8	4.0	3.5	2.4	1.6	22-282	RTA25D6B4M24-**
25	0.188''	6	8'	60	7.8	6.2	5.8	5.0	3.8	22-287	RTA25D6B4M28-**
25	0.156''	7	4'	70	7.2	5.3	4.8	3.7	2.8	22-362	RTA25C7B4M24-**
25	0.156''	7	6'	40	6.4	5.0	4.6	3.8	3.0	22-365	RTA25C7B4M26-**
25	0.156''	7	8'	60	9.2	7.4	6.6	5.1	3.9	22-367	RTA25C7B4M28-**
25	0.188''	7	4'	60	8.2	6.0	5.4	4.2	3.2	22-292	RTA25D7B4M24-**
25	0.188''	7	6'	40	2.5	1.3	0.9	-	-	22-295	RTA25D7B4M26-**
25	0.188''	7	8'	45	5.8	4.4	4.2	3.4	2.8	22-297	RTA25D7B4M28-**
25	0.156''	8	4'	60	6.6	4.7	4.2	3.1	2.3	22-372	RTA25C8B4M24-**
25	0.156''	8	6'	55	3.0	1.8	1.5	-	-	22-375	RTA25C8B4M26-**
25	0.188''	8	6'	45	4.5	3.0	2.6	1.7	1.1	22-305	RTA25D8B4M26-**
25	0.188''	8	8'	40	2.7	1.4	1.1	-	-	22-307	RTA25D8B4M28-**
30	0.156''	7	4'	45	6.6	5.3	4.7	3.4	2.5	22-692	RTA30C7B4M24-**
30	0.156''	7	6'	45	5.5	3.8	3.3	2.4	1.7	22-695	RTA30C7B4M26-**
30	0.188''	7	4'	55	2.9	1.7	1.4	-	-	22-572	RTA30D7B4M24-**
30	0.156''	8	4'	60	9.0	7.2	6.6	5.6	4.4	22-642	RTA30C8B4M24-**
30	0.156''	8	6'	40	4.9	3.2	2.7	1.8	1.1	22-645	RTA30C8B4M26-**
30	0.156''	8	8'	60	2.0	-	-	-	-	22-647	RTA30C8B4M28-**
30	0.188''	8	4'	40	4.2	2.8	2.4	1.7	1.1	22-582	RTA30D8B4M24-**
30	0.188''	8	6'	40	4.1	2.4	2.0	1.0	-	22-585	RTA30D8B4M26-**
30	0.188''	8	8'	45	5.2	3.4	2.9	2.0	1.3	22-587	RTA30D8B4M28-**
30	0.250''	8	6'	70	7.2	5.2	4.6	3.5	2.6	22-605	RTA30F8B4M26-**
30	0.250''	8	8'	55	4.4	2.7	2.3	1.3	-	22-607	RTA30F8B4M28-**
30	0.188''	10	4'	40	6.8	5.2	4.8	4.0	3.2	22-662	RTA30D1C4M24-**
35	0.156''	8	4'	40	2.9	1.5	1.1	-	-	22-922	RTA35C8B4M24-**
35	0.188''	8	4'	45	4.9	3.3	2.8	1.9	1.2	22-862	RTA35D8B4M24-**
35	0.188''	8	6'	45	6.0	4.0	3.4	2.2	1.4	22-865	RTA35D8B4M26-**
35	0.188''	8	8'	55	6.8	4.8	4.4	3.2	2.2	22-867	RTA35D8B4M28-**
35	0.219''	8	6'	60	8.2	6.4	6.0	5.2	4.0	22-875	RTA35E8B4M26-**
35	0.250''	8	4'	45	4.1	2.5	2.1	1.2	-	22-882	RTA35F8B4M24-**
35	0.250''	8	6'	45	6.0	4.6	4.4	3.4	2.8	22-885	RTA35F8B4M26-**
35	0.250''	8	8'	45	5.6	4.2	3.6	2.4	1.5	22-887	RTA35F8B4M28-**
35	0.188''	10	4'	45	5.5	3.9	3.4	2.5	1.8	22-942	RTA35D1C4M24-**
35	0.188''	10	6'	55	6.6	4.6	4.1	2.9	2.1	22-945	RTA35D1C4M26-**
35	0.188''	10	8'	45	3.8	2.0	1.6	-	-	22-947	RTA35D1C4M28-**
40	0.188''	8	4'	70	7.2	5.2	4.7	3.6	2.7	50701-041	RTA40D8B4M24-**
40	0.188''	8	6'	55	3.1	1.8	1.5	-	-	50701-001	RTA40D8B4M26-**
40	0.250''	8	4'	55	6.6	4.6	4.1	3.0	2.2	50701-045	RTA40F8B4M24-**
40	0.250''	8	6'	45	3.4	1.8	1.4	-	-	50701-009	RTA40F8B4M26-**
40	0.250''	8	8'	40	5.6	4.4	4.0	3.2	2.6	50701-010	RTA40F8B4M28-**
40	0.188''	10	6'	60	9.6	7.4	7.0	5.6	4.6	50701-013	RTA40D1C4M26-**
40	0.188''	10	8'	60	7.6	6.4	5.8	4.4	3.3	50701-014	RTA40D1C4M28-**
40	0.219''	10	6'	45	4.8	3.1	2.7	1.8	1.2	50701-015	RTA40E1C4M26-**
40	0.219''	10	8'	45	5.6	4.4	4.0	3.2	2.6	50701-016	RTA40E1C4M28-**
40	0.250''	10	6'	45	4.2	2.5	2.1	1.2	-	50701-017	RTA40F1C4M26-**
40	0.250''	10	8'	60	7.6	6.0	5.6	4.6	3.8	50701-018	RTA40F1C4M28-**

Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

RTA | Mounting Height | Butt Dia. | Base Style | Arm Quant. | - | Finish

RTA | Wall Thick. | Top Dia. | 4 | M | Arm Style | 2 | Arm Lth. | - | |

Catalog Number Example -

RTA 30 D 8 B 4 M 2 6 – 01

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Mast Arm, Double, 6' Arm Length, Satin Aluminum Finish.

Wall Thickness
C = .156"
D = .188"
E = .219"
F = .250"

Butt Diameter
6 = 6"
7 = 7"
8 = 8"
1 = 10"

Top Diameter
B = 4.5"
C = 6"

Base Style
4 = 4-Bolt Base

Arm Style
M = Mast

Arm Quantity
2 = Double

Arm Length
4 = 4'
6 = 6'
8 = 8'

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

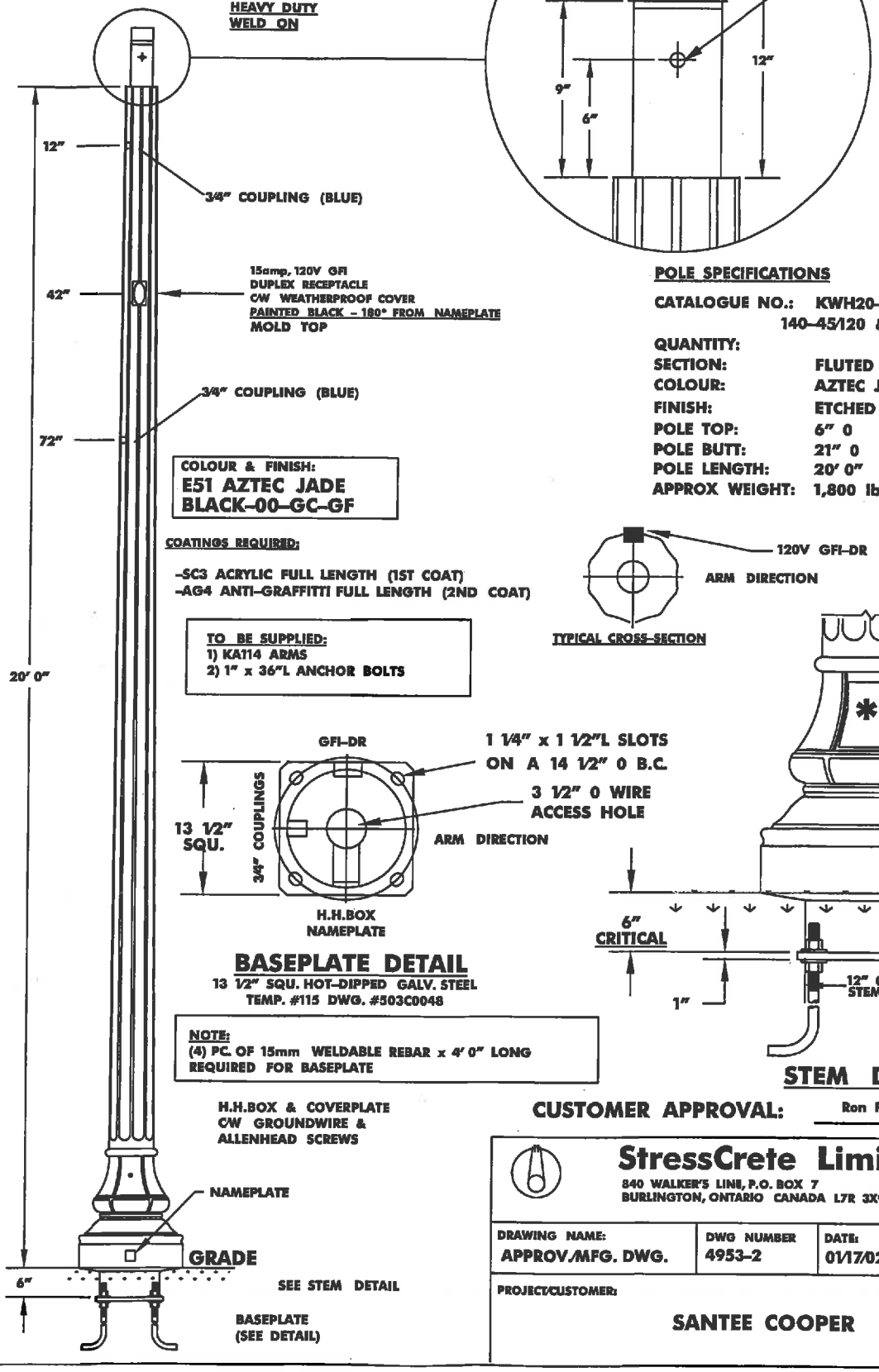
WARNING: *Do not install light pole without luminaire.*

Long Bay (StressCrete)

Example Photo, with Heritage Teardrop Luminaire on Davit (Streetlight Type Group L-2)

TOP SIZE: 6″ 0

REV.	ALTERATION	E.C.N.	DATE	BY



POLE SPECIFICATIONS

CATALOGUE NO.:	KWH20–G–E51–BP C/W 140–45/120 & AB S/F BA–DR
QUANTITY:	
SECTION:	FLUTED ROUND
COLOUR:	AZTEC JADE
FINISH:	ETCHED
POLE TOP:	6″ 0
POLE BUTT:	21″ 0
POLE LENGTH:	20′ 0″
APPROX WEIGHT:	1,800 lbs.

COLOUR & FINISH:
E51 AZTEC JADE
BLACK–00–GC–GF

COATINGS REQUIRED:

–SC3 ACRYLIC FULL LENGTH (1ST COAT)
–AG4 ANTI–GRAFFITTI FULL LENGTH (2ND COAT)

TO BE SUPPLIED:
1) KA114 ARMS
2) 1″ x 36″L ANCHOR BOLTS

TYPICAL CROSS–SECTION

BASEPLATE DETAIL
13 1/2″ SQU. HOT–DIPPED GALV. STEEL
TEMP. #115 DWG. #503C0048

NOTE:
(4) PC. OF 15mm WELDABLE REBAR x 4′ 0″ LONG
REQUIRED FOR BASEPLATE

STEM DETAIL

CUSTOMER APPROVAL: Ron Forrer – 6/27/2002

StressCrete Limited
840 WALKER'S LINE, P.O. BOX 7
BURLINGTON, ONTARIO CANADA L7R 3X9

DRAWING NAME:	DWG NUMBER	DATE:	DWG BY:	REV.
APPROV./MFG. DWG.	4953–2	01/17/02	A.A.	

PROJECT/CUSTOMER:

SANTEE COOPER

\KC-ORDER\4953

Atlantic (Shakespeare Washington Composite)

Example Photo, with Heritage Teardrop (Sag Glass, Deep Skirt) Luminaire on Davit (Streetlight Type Group L-3)

Shakespeare
A valmont MANC
COMPOSITE TUFF-POLE

Washington Style, 20" Anchor Base and Direct Burial

THE HISTORICAL SERIES

Washington

Distinctive, classical beauty

Virtually maintenance free, durable fiberglass reinforced composite

One-piece construction

Smooth or fluted, tapered shafts

Standard or custom finishes and colors

Standard, special, premium, and architectural colors available, or any color can be matched

Gloss or semi-gloss finishes standard; custom finishes available

Mounting heights of 9.5, 12, or 14.5 feet; custom heights to 20 feet

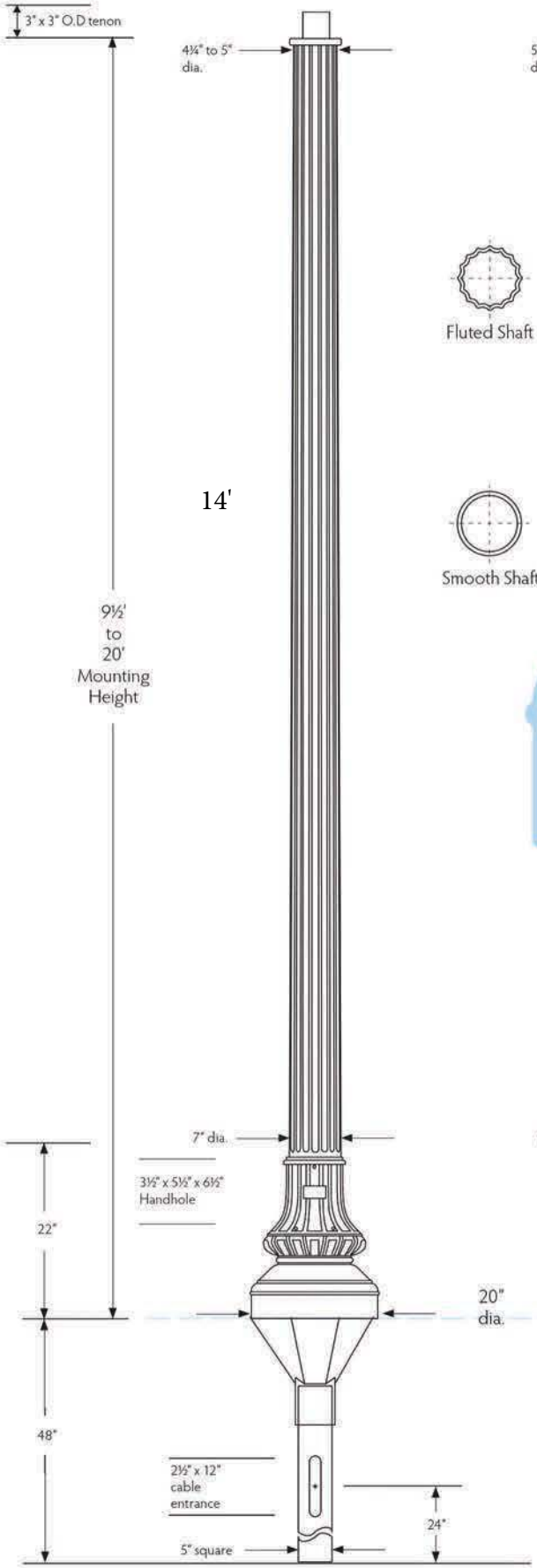
Superior wind, loading, and environmental tolerance

Non-conductive for safety

Molded-in color; UV and weather resistant polyurethane coating

Standard 3" x 3" dia. aluminum tenon for luminaire mounting

Anchor Base or Direct Burial



AP20 and BP20

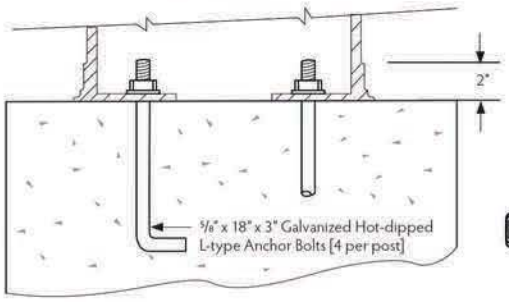
Washington, 20" Anchor and Direct Burial Base

Washington

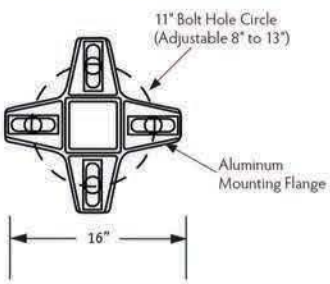
All dimensions and specifications nominal, and subject to change without notice or obligation. Please contact factory before site preparation begins.

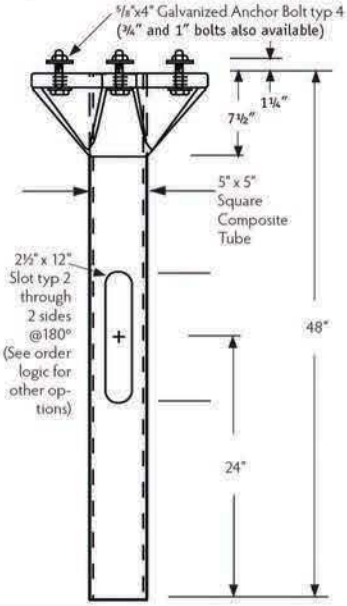
Suggested Anchorage Detail

(Anchor Base)

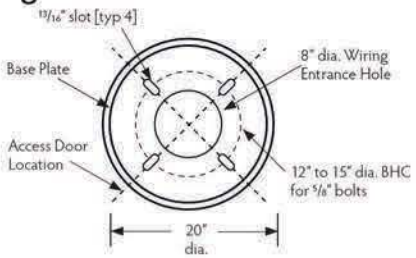


Optional Composite Burial Foot





Washington Anchor Bolt Pattern Detail



OPTIONS

3-Bolt Base or optional **Bolt Circle:** contact factory.

Weatherproof **receptacle** mounted 9" from top of pole, 90° clockwise from handhole: add **"W1"** to the catalog number.

Weatherproof **receptacle** mounted 18" from the top of the base on the shaft, 90° clockwise to the handhole: add **"W2"** to the catalog number. For other receptacle options, specify or contact factory.

Banner **arms**, flag **brackets, luminaires,** and other **attachments** are available. Contact factory.

Decorative Twin Fixture Crossarm (Catalog number **A-30**) add **"A1"** to pole catalog number. See Arms and Brackets, Section C in this catalog, for other **decorative twin arms.**

Detachable **Composite Burial Foot** permits direct burial of foot prior to mounting. See Burial Foot brochure for specifications and catalog numbers.

Catalog Numbers for Washington Style 20"

Base Type
A=Anchor Base
B=Direct Burial
Style
P=Washington

Shaft Type
F=Fluted
S=Smooth

Color
1=Black
2=Gray
3=Brown
4=Dk Green
5=Dk Bronze
6=Silver
7=White
9=Specify*

Options
(See "Options" above)

AP20	-	12	F	G	1	1	

Base Dia. (in.)
20" dia.

Mounting Height (ft.)
9.5 to 20

Finish
G-Gloss
S=Semi-gloss

Direct Burial Conduit Entrance
(use "1" for Anchor Base)

Location from bottom of pole	1 ea. 2"x12"	2 ea. 2"x12" @ 180°
None	1	1
12"	2	3
18"	4	5
24"	6	7
Other (specify)	0	0

*Standard, premium, and architectural colors are available. See **Tuff-Pole® Color Palette** brochure.

How to Specify

Description: The pole shaft and base (and internal mounting flange) shall all be molded of non-corroding fiberglass reinforced composite, pigmented throughout, and finished in the same color as specified. The (fluted) shafts shall be tapered and formed with 16 flutes separated by semi-flat ribs. The (smooth) shafts shall be filament wound with a smooth, tapered surface. The base shall be shaped similar to Shakespeare Composite Structures Washington style **AP20** (anchor base) / **BP20** (direct burial).

Dimensions: The pole shall be 9½ to 20 feet mounting height with a 20-inch diameter base. A 3" diameter by 3" high aluminum tenon shall be provided for luminaire mounting. (Direct Burial) The direct burial foundation shall be 48" overall length and provided with a 2.5" x 12" conductor entrance centered 24" from the bottom of the direct burial base (see order logic for other options). (Anchor Base) The internal mounting flange shall be provided with four 13/16" slots to accommodate 4 anchor bolts 5/8" x 18" x 3" in a 12" to 15" bolt circle.

Construction: The shaft shall be round with a uniform taper along the fluted (smooth) shaft. A handhole with a weather resistant cover shall be provided in the base for wiring access (if anchor base) and anchorage. The opening shall be no smaller than 3.5" wide at the top by 5.5" at the bottom by 6.5" high. The cover shall be made of fiberglass reinforced composite and shall bear the manufacturer's name. The cover shall be attached with 3 stainless steel flat countersunk hex socket head screws. Threaded inserts shall be incorporated in the pole base.

The (anchor base) mounting flange shall be molded in one piece of fiberglass reinforced composite with a minimum thickness of ½" and shall be permanently bonded flush to the bottom of the base. Each pole shall be finished with a (glossy / semi-gloss) weather resistant polyurethane having a minimum dry film thickness of 1.5 mils.

(Add **"Performance and Testing Requirements"** from the Specification Data sheet on page 3.)

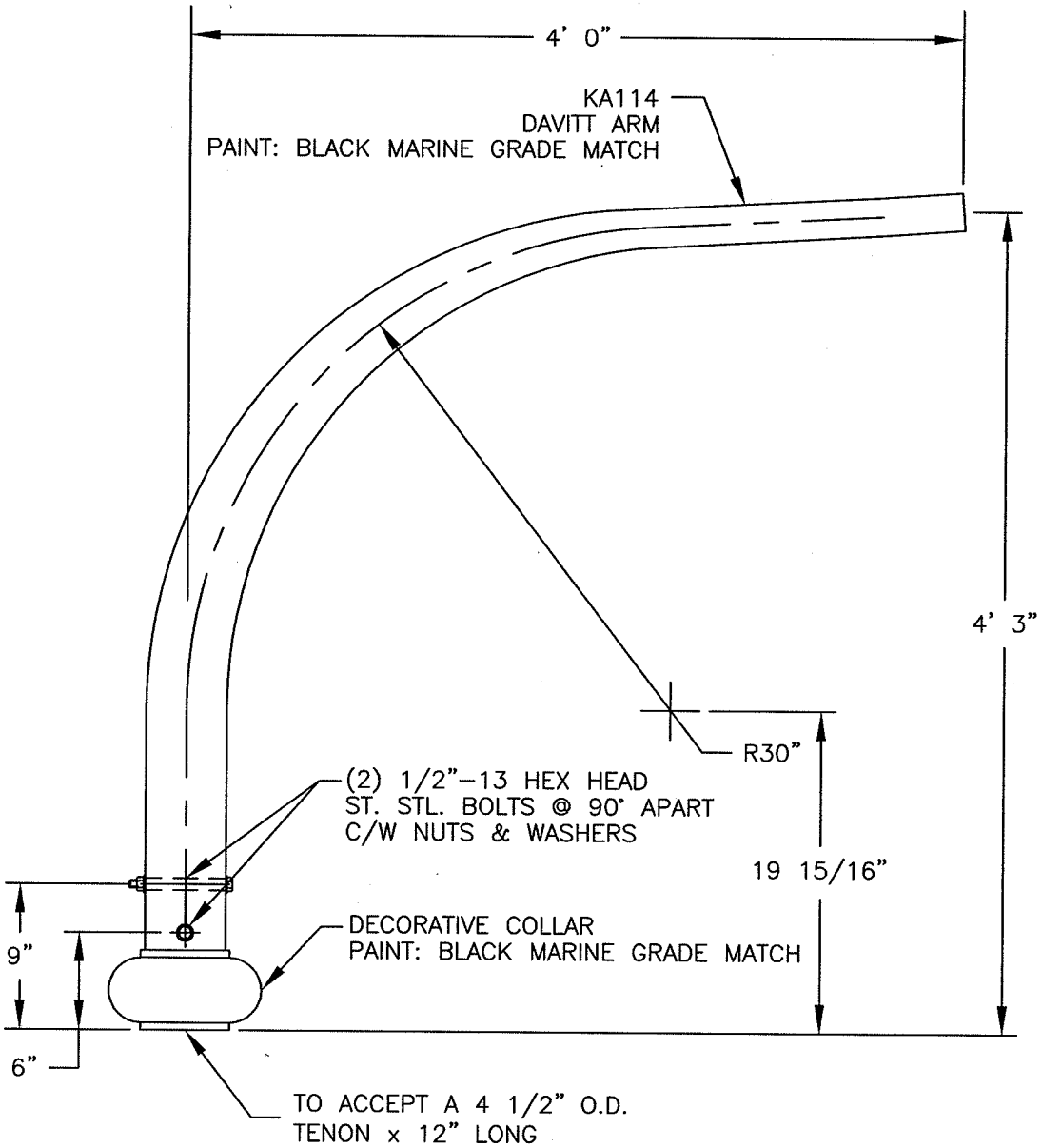
EPA Rating

Washington P20 style poles are engineered to withstand at least 100 mph wind forces, with luminaires up to 6.2 EPA (sq. ft.) weighing up to 150 pounds. Many Other loading options are available. For other loading requirements, contact the factory.

Shakespeare
A valmont BRAND

803.276.5504 · 800.800.9008 · F/803.276.8940 · www.skp-cs.com

Davit Arms



REV.	ALTERATION	DATE	BY

CUSTOMER ORDER No:

SC2 ORDER No:

KING CANADA ORDER No:

ARM SPECIFICATIONS

CATALOGUE NO.: KA114
MAT'L: ALUMINUM

PAINT REQUIREMENTS:

COLOR: BLACK GLOSS POLYESTER POWDER COAT MARINE GRADE

NOTE:
1) ARM MUST BE PALLETIZED, SHRINK WRAPPED AND SHIPPED ON A 4' x 4' PALLET.
2) ARMS TO BE BUNDLED IN MULTIPLES OF SIX.
3) HARDWARE TO BE PAINTED.

CUSTOMER APPROVAL & DATE: _____

King Luminaire • StressCrete • Est. 1953

STRESSCRETE GROUP

Manufacturing Locations:
Burlington, Ontario 1–800–268–7809
Northport, Alabama 1–800–435–6563
Atchison, Kansas 1–800–837–1024
Jefferson, Ohio 1–800–268–7809

PROJECT/CUSTOMER: SANTEE COOPER

DRAWN BY:	AT:	CHECKED BY:	DATE:	REVISION:
A. ALVELA	SC1		03/08/11	

DRAWING TYPE: APPROVAL DRAWING

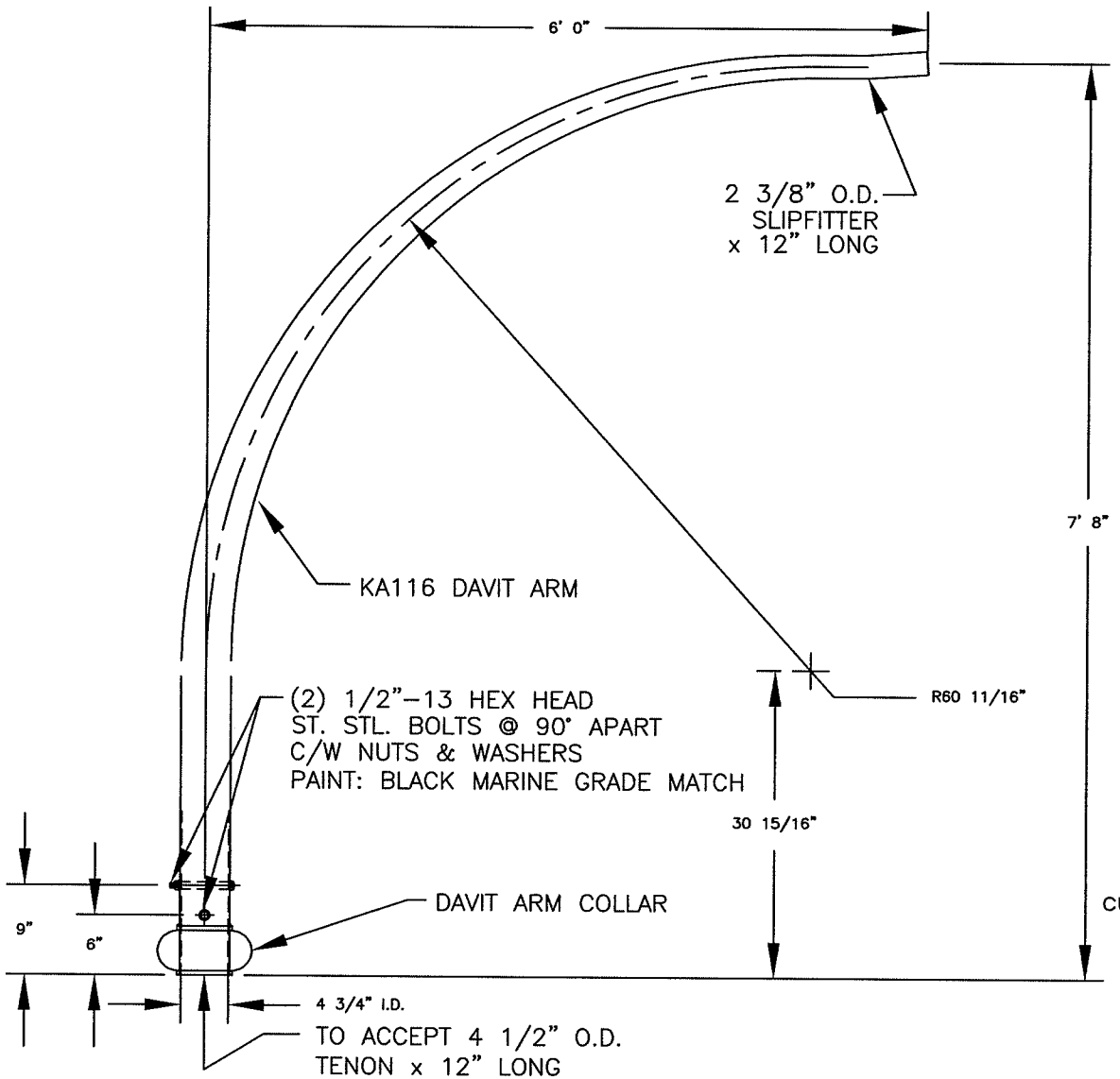
DRAWING NUMBER: SANTEE_COOPER-7

REV.	ALTERATION	DATE	BY

CUSTOMER ORDER No:

SC2 ORDER No:

KING CANADA ORDER No:



ARM SPECIFICATIONS

CATALOGUE NO.: KA116

MAT'L: ALUMINUM

PAINT REQUIREMENTS:

COLOR: BLACK GLOSS POLYESTER POWDER COAT MARINE GRADE

NOTE:
1) ARM MUST BE PALLETIZED, SHRINK WRAPPED AND SHIPPED ON A 4' x 4' PALLET.
2) ARMS TO BE BUNDLED IN MULTIPLES OF SIX.
3) HARDWARE TO BE PAINTED.

CUSTOMER APPROVAL & DATE: _____

King Luminaire • StressCrete • Est. 1953

STRESSCRETE GROUP

Manufacturing Locations:

Burlington, Ontario 1-800-268-7809

Northport, Alabama 1-800-435-6563

Atchison, Kansas 1-800-837-1024

Jefferson, Ohio 1-800-268-7809

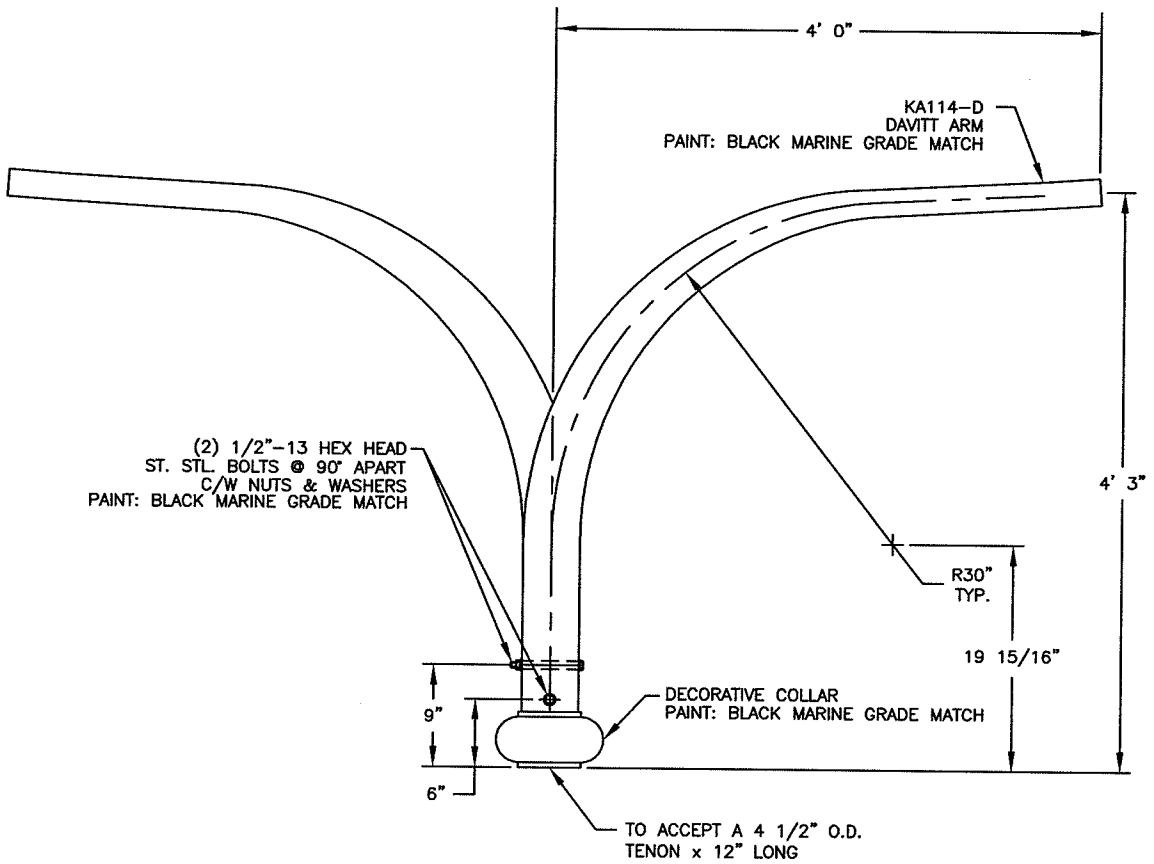
PROJECT/CUSTOMER: SANTEE COOPER				
DRAWN BY: A. ALVELA	AT: SC1	CHECKED BY:	DATE: 03/08/11	REVISION:
DRAWING TYPE: APPROVAL DRAWING			DRAWING NUMBER: SANTEE_COOPER-5	

REV.	ALTERATION	DATE	BY

CUSTOMER ORDER No:

SC2 ORDER No:

KING CANADA ORDER No:



ARM SPECIFICATIONS

CATALOGUE NO.: KA114-D
MAT'L: ALUMINUM

PAINT REQUIREMENTS:

COLOR: BLACK GLOSS POLYESTER POWDER COAT MARINE GRADE

NOTE:
1) ARM MUST BE PALLETIZED, AND SHRINK WRAPPED.
2) ARMS TO BE BUNDLED IN MULTIPLES OF SIX.
3) HARDWARE TO BE PAINTED.

CUSTOMER APPROVAL & DATE: _____

King Luminaire • StressCrete • Est. 1953

STRESSCRETE GROUP

Manufacturing Locations:

Burlington, Ontario 1-800-268-7809

Northport, Alabama 1-800-435-6563

Atchison, Kansas 1-800-837-1024

Jefferson, Ohio 1-800-268-7809

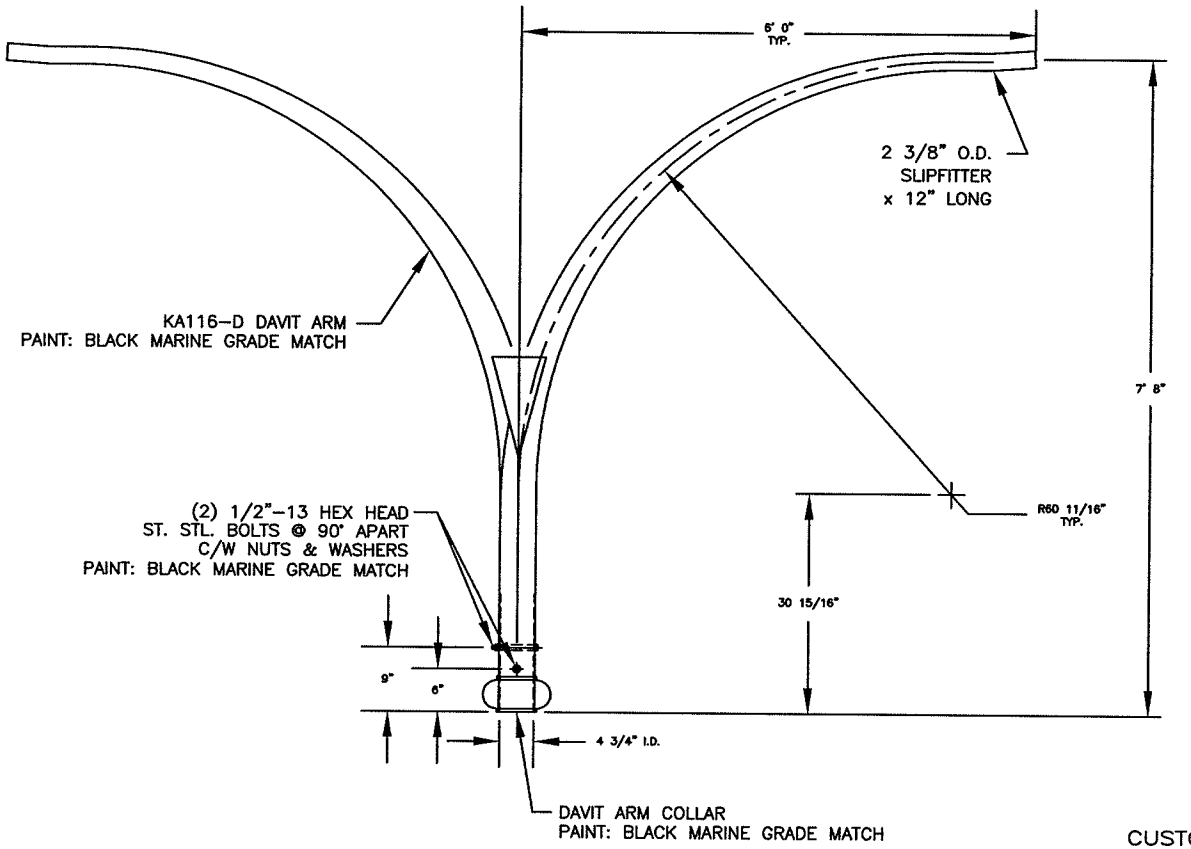
PROJECT/CUSTOMER: SANTEE COOPER				
DRAWN BY: A. ALVELA	AT: SC1	CHECKED BY:	DATE: 03/08/11	REVISION:
DRAWING TYPE: APPROVAL DRAWING			DRAWING NUMBER: SANTEE_COOPER-8	

REV.	ALTERATION	DATE	BY

CUSTOMER ORDER No:

SC2 ORDER No:

KING CANADA ORDER No:



ARM SPECIFICATIONS

CATALOGUE NO.: KA116-D

MAT'L: ALUMINUM

PAINT REQUIREMENTS:

COLOR: BLACK GLOSS POLYESTER POWDER COAT MARINE GRADE

NOTE:
1) ARM MUST BE PALLETIZED, AND SHRINK WRAPPED.
2) ARMS TO BE BUNDLED IN MULTIPLES OF SIX.
3) HARDWARE TO BE PAINTED.

CUSTOMER APPROVAL & DATE: _____

King Luminaire • StressCrete • Est. 1953

STRESSCRETE GROUP

Manufacturing Locations:

Burlington, Ontario 1-800-268-7809

Northport, Alabama 1-800-435-6563

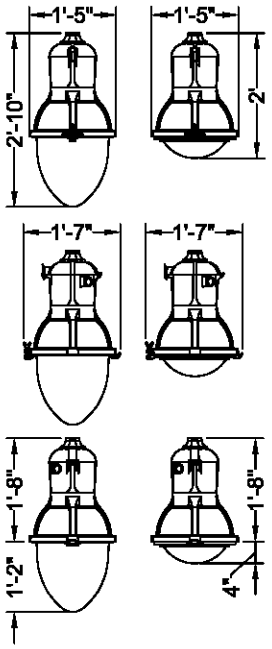
Atchison, Kansas 1-800-837-1024

Jefferson, Ohio 1-800-268-7809

PROJECT/CUSTOMER: SANTEE COOPER				
DRAWN BY: A. ALVELA	AT: SC1	CHECKED BY	DATE: 03/08/11	REVISION:
DRAWING TYPE: APPROVAL DRAWING			DRAWING NUMBER: SANTEE_COOPER-6	

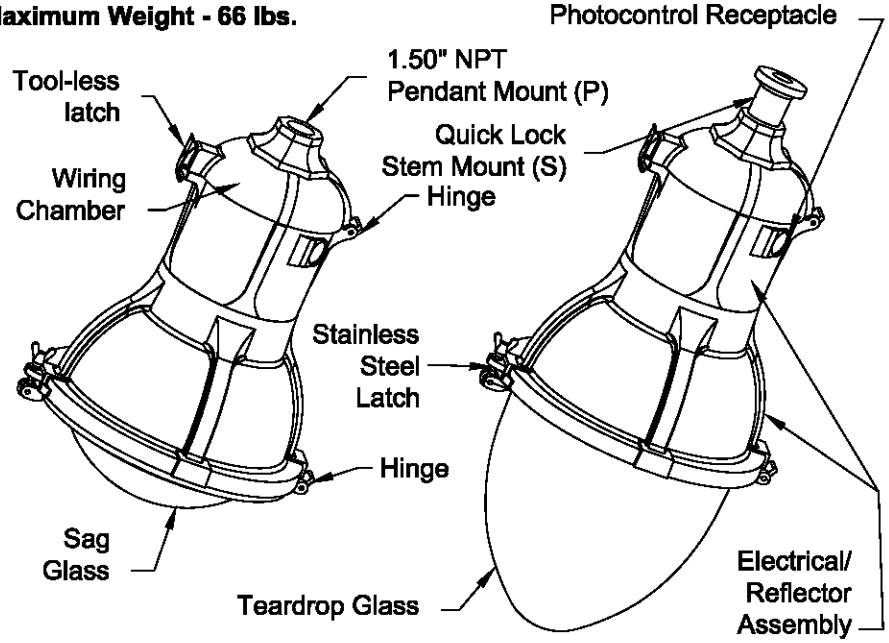
Luminaires

Heritage Teardrop



Maximum Effective Projected Area - 2.37 ft²
Maximum Weight - 66 lbs.

Optional NEMA Turn-Lock Photocontrol Receptacle



Memphis Utility

DECORATIVE OUTDOOR

HOLOPHANE® LEADER IN LIGHTING SOLUTIONS
An Acuity Brands Company

ORDERING INFORMATION:

MPU *15AHP* *12* *B* *6* *S*

COVER TYPE
MPU = Memphis Utility

BALLAST TYPE
(MOGUL BASE)
070HP = 70W HPS
100HP = 100W HPS
15AHP = 150W 55V HPS
250HP = 250W HPS
400HP = 400W HPS
150MH = 150W MH
175PM = 175W MH PULSE
250PM = 250W MH PULSE
320PM = 320W MH PULSE
350PM = 350W MH PULSE
400PM = 400W MH PULSE

NOTE:
MH is compliant with DOE/EISA regulations starting February 10, 2017.

VOLTAGE
12 = 120 VOLT CULUS
20 = 208 VOLT
24 = 240 VOLT
27 = 277 VOLT CULUS
34 = 347 VOLT CUL
48 = 480 VOLT
MA = MT (WIRED 120V)
MB = MT (WIRED 208V)
MC = MT (WIRED 240V)
MD = MT (WIRED 277V)

HOUSING COLOR
A = As Specified
B = Black
N = Green
Z = Bronze

OPTICS
4 = TEARDROP ASYMMETRIC
6 = SAG CLEAR SYMMETRIC
7 = SAG CLEAR ASYMMETRIC

TOP ENTRY
P = 1.50 NPT PENDANT MOUNT
S = QUICK LOCK STEM MOUNT

OPTIONS
PS = PROTECTED STARTER (HPS ONLY)
R = TURN-LOCK PHOTOCONTROL RECEPTACLE
DS = DEEP SKIRT
SS = SHORT SKIRT
P27 = PHOTOCONTROL 105-305 VOLT (USED WITH "R" OPTION)
P48 = PHOTOCONTROL 420-530 VOLT (USED WITH "R" OPTION)
PSC = SHORTING CAP
L1H = 1.5 FT. PREWIRED LEADS
L03 = 3 FT. PREWIRED LEADS
L10 = 10 FT. PREWIRED LEADS
L20 = 20 FT. PREWIRED LEADS
L25 = 25 FT. PREWIRED LEADS
L30 = 30 FT. PREWIRED LEADS

Specifications

DESCRIPTION
The Memphis luminaire is styled to replicate the "teardrop" luminaires that lighted boulevards in the first half of this century. Designed for light control and ease of installation and maintenance, the Memphis has a precision optical system for true street lighting performance.

WIRING CHAMBER
The wiring chamber has either a 1.50 inch NPT and stainless steel set screw or a welded stem. The stem aides in installation speed. Provided with a (3) station terminal block that accepts #14 through #2 wires and has a quick disconnect harness with removable electrical module.

ELECTRICAL / REFLECTOR ASSEMBLY
The electrical / reflector assembly hinges down from the wiring chamber for ease in wiring and to facilitate the removal of the electrical module. The assembly is secured in place by a stainless steel latch. The unitized electrical module consists of the ballast mounted to an aluminum plate that is easily removed by loosening two screws in keyhole slots. The disconnect plug connects the ballast to the terminal block in the wiring chamber. The socket is street lighting grade with nickel plated lamp grip shell, center contact backed by a coiled spring and glazed porcelain body. The anodized and brightened reflector is formed with flutes to control voltage rise in the lamp and to work in conjunction with the refractor to provide the desired distribution of light.

REFRACTOR / DOOR ASSEMBLY
The cast aluminum door cradles a teardrop or sag shaped, thermal resistant borosilicate glass refractor that controls the light to provide an I.E.S. symmetric or asymmetric cut off distribution. The combination of reflector, refractor and vertical burning lamp maximize efficiency and uniformity of illumination while controlling luminaire brightness. The refractor assembly and decorative skirt (when applicable) assembly hinges from the electrical / reflector assembly and is latched by a stainless steel, captive, wing nut assembly.

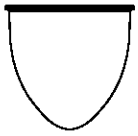
BALLAST
(Refer to Ballast Data Sheet for specific operating characteristics)
150 watt and below 120 volt High Pressure Sodium (HPS) ballasts are High Power Factor Reactor type. All other 150 watt and below are High Power Factor Autotransformer type. 250 and 400 watt HPS ballasts are Lead type.
All Metal Halide (MH) ballasts are Peak Lead Autotransformer type. MH is compliant with DOE/EISA regulations starting February 10, 2017.

FINISH / MATERIAL
The luminaire is finished with polyester powder paint to insure maximum durability. All castings utilize alloy #356 aluminum for maximum corrosion resistance and all exposed hardware is stainless steel.

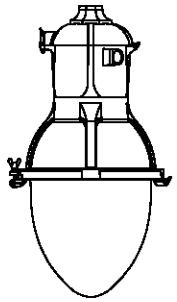
CUL/U.L. LISTING
CUL/U.L. listing suitable for wet locations at 40 degrees C.

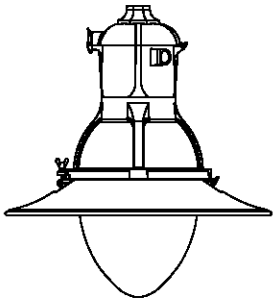
ORDER #:	
TYPE:	
DRAWN:	RAF
DATE:	02/10/2017
DWG NO:	LUM_MEMPHIS

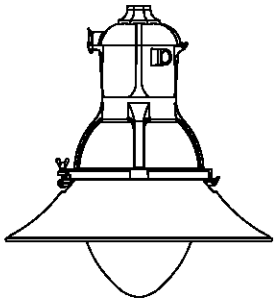
Standard | **Shallow Skirt** | **Deep Skirt**



Teardrop Glass
Asymmetric







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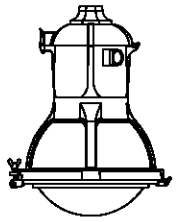
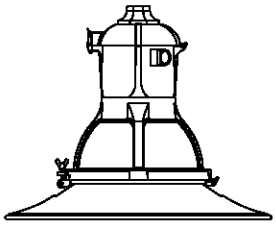
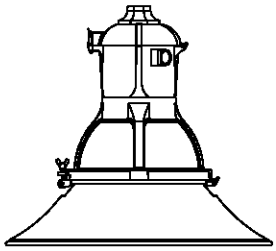
Sag Glass
Symmetric
Asymmetric







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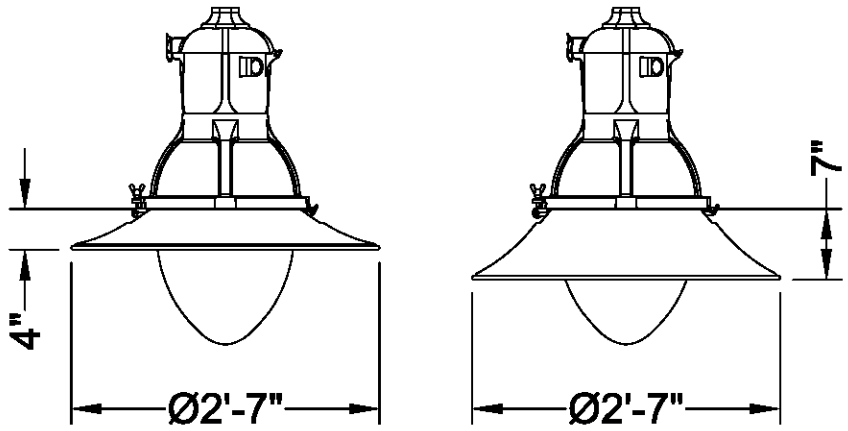
Mark Appropriate Box for Trim Option

Skirt Dimensions



Memphis Utility

DECORATIVE OUTDOOR

HOLOPHANE® LEADER IN LIGHTING SOLUTIONS
An AcuityBrandsCompany

ORDER #:	
TYPE:	
DRAWN:	RAF
DATE:	02/10/2017
DWG NO:	LUM_MEMPHIS

HPS Roadway

Roadway Series 125

Roadway Lighting

150-400W HPS, 175-400W MH

PRODUCT OVERVIEW

Applications:

Roadways
Residential streets
Storage areas
Parking lots
Campuses
Parks

Features:

Rugged die-cast aluminum housing is powder-coated for durability and corrosion resistance

Optional two-bolt mast arm mount provides easy, secure installation and adjustability for arms from 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter. Standard four-bolt mounting provides extra security in high-vibration applications

Die-cast trigger latch on doorframe enables easy and secure one-hand opening for re-lamping and maintenance

Large surface area "breathing seal" gasket seals the optical chamber to prevent intrusion by insects and environmental contaminants. Heat-resistant gasket material remains effective over the life of the fixture

Wildlife shield is cast into the housing (not a separate piece) with 2B option and is easily adjustable for 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) mast arms

Photocontrol receptacle is adjustable without tools

Anodized aluminum reflectors provide uniform lighting distribution with either borosilicate glass, or polycarbonate refractor

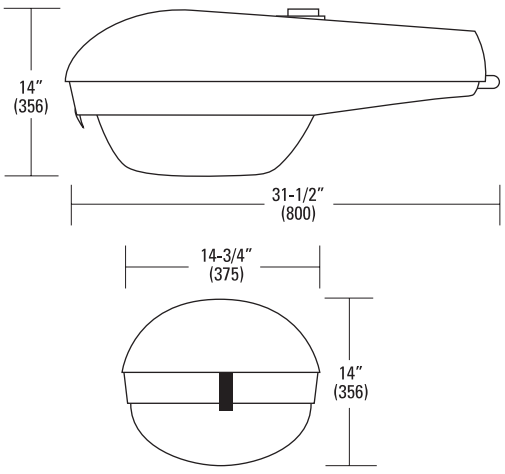
NEMA wattage label, terminal block, and NEMA photocontrol receptacle are standard

E39 mogul socket standard

Complies with ANSI: C136.2, C136.10, C136.14, C136.15, C136.17, C136.31

Suitable for -40°C

DIMENSIONS



Effective Projected Area (EPA)
The EPA for the Horizontal Luminaire series 125 is 1.30 sq. ft.
Approx. Wt. = 35 lbs.

PREFERRED SELECTION CATALOG NUMBERS

125 25S CA MT1 R3 DG EC
125 40S CA MT1 R3 DG EC
125 40M SC MT1 R3 DG

Roadway Series 125

Roadway Lighting

150-400W HPS, 175-400W MH

ORDERING INFORMATION

Example: 125 40S CA MT1 R3 DG LC PC

Series

125 Single Door Cobrahead

Wattage / Source

15 150W
17 175W
20 200W
23 250/400W Wired 250
24 250/400W Wired 400
25 250W
31 310W
32 320W
35 350W
40 400W
S HPS
M MH

Ballast

RN Reactor Normal Power Factor
RH Reactor High Power Factor
XN High Reactance (Lag) Normal Power Factor
XH High Reactance (Lag) High Power Factor
CA CWA
CT CWI
SC SCWA
MR Mag Reg (3 Coil)

Voltage

120 120V
208 208V
240 240V
277 277V
347 347V
480 480V
MT1 Multi-tap Wired 120V
MT2 Multi-tap Wired 240V
MT7 Multi-tap Wired 277V
TT3 Tri-tap Wired 347V
DT1 Dual Tap 120/240 Wired 120V
DT2 Dual Tap 120/240 Wired 240V
DT4 Dual Tap 240/480 Wired 480V
5T4 5-tap Wired 480V [2]

Distribution

R2 Roadway Type II
R3 Roadway Type III
R4 Roadway Type IV

Refer to optic distribution matrix below for compatibility.

Optics

DP Drop Polycarbonate Prismatic Refractor
DG Drop Glass Prismatic Refractor

Options

Mounting
(blank) 4-bolt Internal (standard)
F2 4-bolt Internal 2" setting
M2 2-bolt Internal 2" Setting
2B 2-bolt Internal 1-1/4" Setting

Paint [1]
(blank) Gray (standard)
BK Black
BZ Bronze
DDB Dark Bronze
WH White
UP Unpainted

Terminal Block
(blank) Terminal Block (standard)
T2 Wired to L1 & L2 Positions
T3 3 Wire Operation (L1, N, L2 Position) [2]

Listing
UL UL Listed
CS CSA Certified

Fusing [3]
SF Single Fuse (120, 277, 347V)
DF Double Fuse (208, 220, 240, 480V)

Photocontrol Receptacle
(blank) NEMA Photocontrol Receptacle (standard)
NR No Photocontrol Receptacle [4]

Lamp
LC Lamp Included, Clear
LD Lamp Included, Deluxe/Coated

Starter [5]
(blank) Open Board (standard)
EC Encapsulated Plug-in
OP Open Plug-in

Misc.
PC Photocontrol Included per Voltage Specified [4]
BF Bridge fitter (3G max)
BL Bubble Level
SS Stainless Steel Fasteners (external)
CF Charcoal Filter
PL Distribution Pattern Indicator Label
LA Lightning Arrestor (Void UL/CSA Certified Options)
NN No NEMA Label on Housing
SH Shorting Cap [5]
HK Hinge Keeper
RG Rubber Silicone Optical Gasket

Notes:
1 Other colors available, please contact your local American Electric Lighting representative
2 T3 option only available with 240, 480, DT2, DT4, MT2
3 Not available with MT, TT, DT voltages
4 PC and SH not available in NR option
5 Available in HPS only

Optic Distribution

	R2 DP	R3 DP	R2 DG	R3 DG	R4 DG
15S	-	-	▲	▲	-
17M	▲	▲	▲	▲	-
20S	▲	▲	▲	▲	▲
20M	-	-	-	▲	-
23S	▲	▲	▲	▲	▲
24S	▲	▲	▲	▲	▲
25S	▲	▲	▲	▲	▲
25M	▲	▲	▲	▲	-
31S	▲	▲	▲	▲	▲
32M	▲	▲	▲	▲	-
35M	▲	▲	▲	▲	-
40S	▲	▲	▲	▲	▲
40M	▲	▲	▲	▲	-

AEL American Electric Lighting®
AEL Headquarters, 3825 Columbus Road, Granville, OH 43023
www.americanelectriclighting.com

Warranty Five-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

Please contact your sales representative for the latest product information.

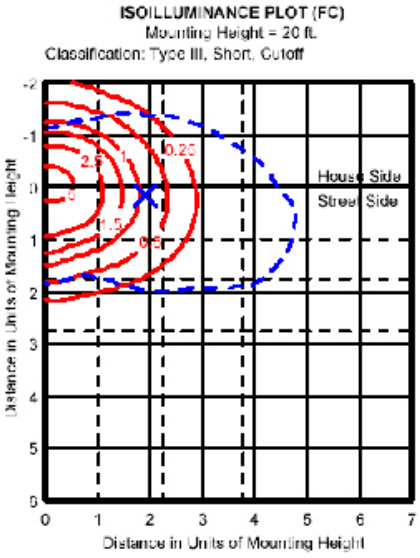
BALLAST MATRIX

Watts	120	208	240	277	347	480	DT1
15S	CA	CA	CA	CA	XN,XH	CA,XN,XH,MR	CA
17M	SC	SC	SC	SC	-	SC	SC
20S	CA,CT,MR,XN,XH	CA,CT	CA,CT,MR,XH,XN	CA,CT,MR	CA	CA,MR	CA,CT,MR,XN,XH
20M	SC	SC	SC	SC	-	-	-
23S	CA	CA,CT	CA	CA,CT	CA	-	CA
24S	CA	CA	CA	CA	-	-	CA
25S	CA,CT,MR,XN,XH	CA,CT	CA,CT,RN,RH,MR,XH,XN	CA	-	CA,MR	CA,CT,MR,XN,XH
25M	SC	SC	SC	SC	SC	SC	SC
31S	CA,MR	CA	CA,MR	CA	-	MR	CA,MR
32M	SC	SC	SC	SC	-	SC	SC
35M	SC	SC	SC	SC	-	SC	SC
40S	CA,CT,MR	CA,CT,MR,RN,RH	CA,CT,MR,RN,RH	CA,CT	CA	CA,MR	CA,CT,MR
40M	SC	SC	SC	SC	-	SC	SC

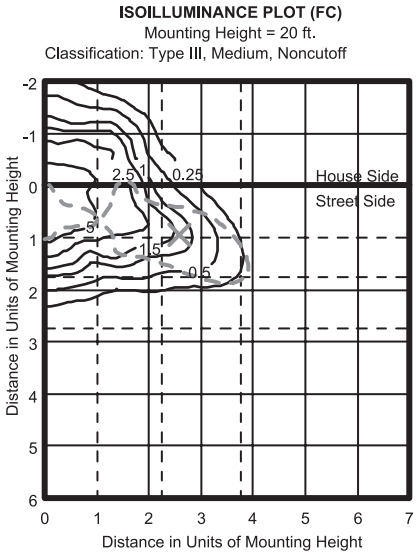
Watts	DT2	DT4	MT1	MT2	MT7	TT3	5T4
15S	CA	CA	CA	CA	CA	XN,XH	-
17M	SC	-	SC	SC	SC	-	-
20S	CA,CT,MR,XN,XH	MR	CA,CT	CA,CT	CA,CT	CA	-
20M	-	-	SC	SC	SC	-	-
23S	CA	-	CA	CA	CA	-	-
24S	CA	-	CA	CA	CA	-	-
25S	CA,CT,MR,XN,XH	MR	CA,CT	CA,CT	CA,CT	CA	CA
25M	SC	SC	SC	SC	SC	SC	-
31S	CA, MR	CA	CA	CA	CA	-	-
32M	SC	SC	SC	SC	SC	-	-
35M	SC	SC	SC	SC	SC	-	-
40S	CA,CT,MR	MR	CA	CA	CA	CA	CA
40M	SC	-	SC	SC	SC	-	SC

PHOTOMETRICS

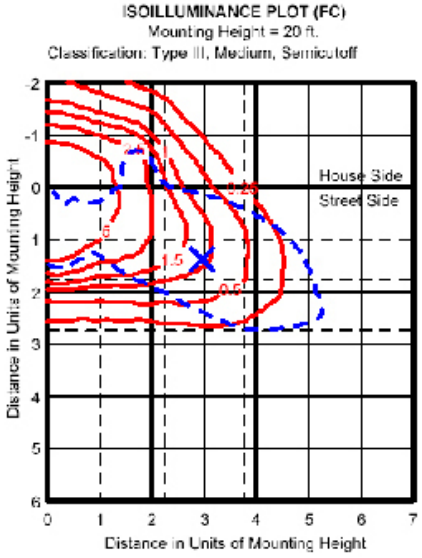
125 25S R3 DG LD



125 40M SC R3 DG



125 40S R3 DG



× Maximum Intensity

American Electric Lighting®
AEL Headquarters, 3825 Columbus Road, Granville, OH 43023
www.americanelectriclighting.com

Warranty Five-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

Please contact your sales representative for the latest product information.

Traffic Signal/Sign Poles (TSSPs)

TSSP Type Group T-1 – OB Decorative

Example Photo; Type Group T-1p Pedestrian Pole also shown on right
(Beach Pylon and Type Group L-3 Streetlights also appear in background)

Mast Arm pole sizes on Ocean Blvd.

All poles are Union metal decorative.

3rd South

Twin 35' & 40'

Twin 20' & 35'

3 ped poles

7th North

Twin 35' & 45'

Twin 35' & 50'

2 ped poles

8th North

Twin 30' & 50'

Twin 25' & 50'

2 ped poles

9th North

Twin 35' & 35'

Twin 35' & 50'

2 ped poles

Joe White

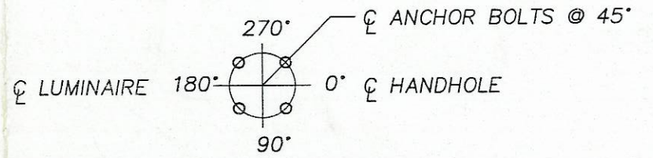
Twin 25' & 45'

Single 35'

2 ped poles

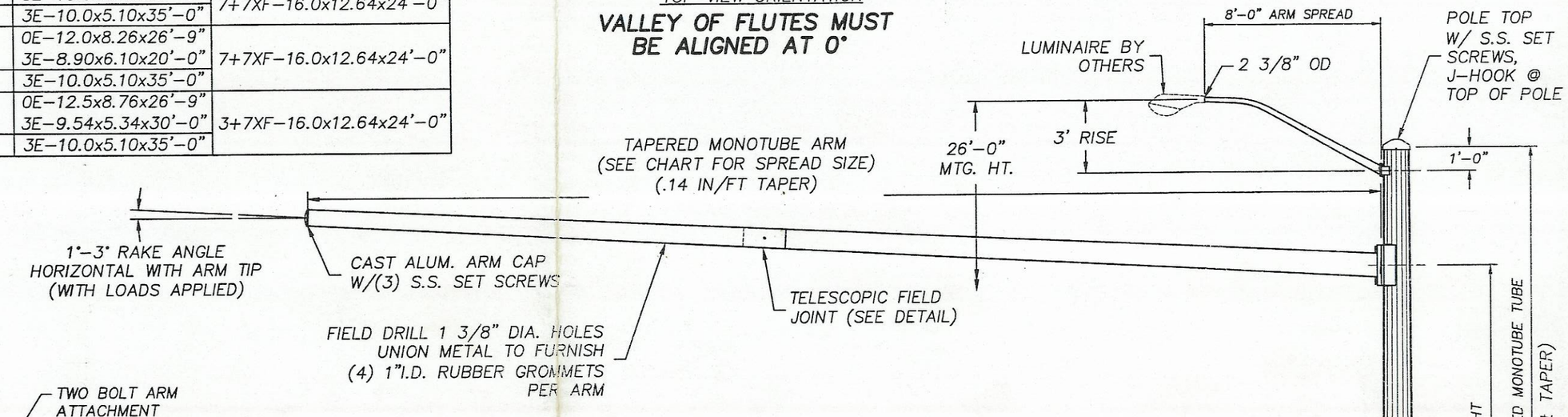
DESIGN NO.	ARM SPREAD	ARM LOCATION	ARM SIZE	POLE SIZE
50312-B30-Y1	55'	180°	0E-12.5x8.76x26'-9" 3E-9.54x5.34x30'-0"	3+7XF-16.0x12.64x24'-0"
	25'	270°	7E-9.0x5.50x25'-0"	
50312-B30-Y2	35'	180°	3E-10.0x5.10x35'-0"	3XF-16.0x12.64x24'-0"
50312-B30-Y3	50'	90°	0E-12.5x8.76x26'-9" 3E-9.54x6.04x25'-0"	3+7XF-16.0x12.64x24'-0"
	35'	180°	3E-10.0x5.10x35'-0"	
50312-B30-Y4	35'	90°	3E-10.0x5.10x35'-0"	7+7XF-16.0x12.64x24'-0"
	35'	180°	3E-10.0x5.10x35'-0"	
50312-B30-Y5	45'	90°	0E-12.0x8.26x26'-9" 3E-8.90x6.10x20'-0"	7+7XF-16.0x12.64x24'-0"
	35'	180°	3E-10.0x5.10x35'-0"	
50312-B30-Y6	55'	90°	0E-12.5x8.76x26'-9" 3E-9.54x5.34x30'-0"	3+7XF-16.0x12.64x24'-0"
	35'	180°	3E-10.0x5.10x35'-0"	

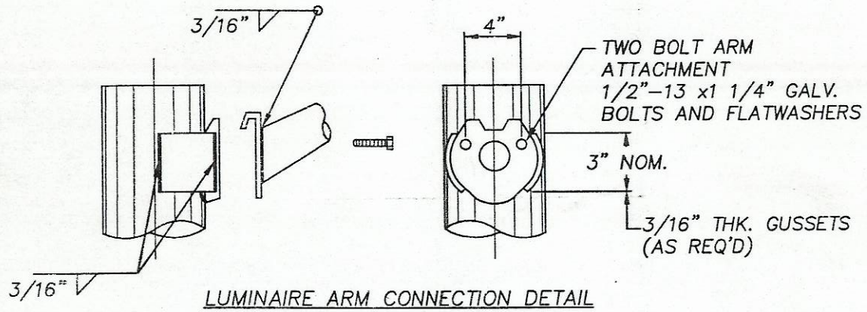
7+7XF=0.3586" THK WALL
3+7XF=0.4293" THK WALL
3XF=0.2500" THK WALL
0E=0.3125" THK WALL
3E=0.2500" THK WALL
7E=0.1793" THK WALL
(F=0.14 in/ft TAPER 16 FLUTE TUBE)
(E=0.14 in/ft TAPER TUBE)



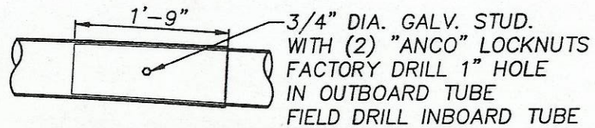
TOP VIEW ORIENTATION

VALLEY OF FLUTES MUST BE ALIGNED AT 0°

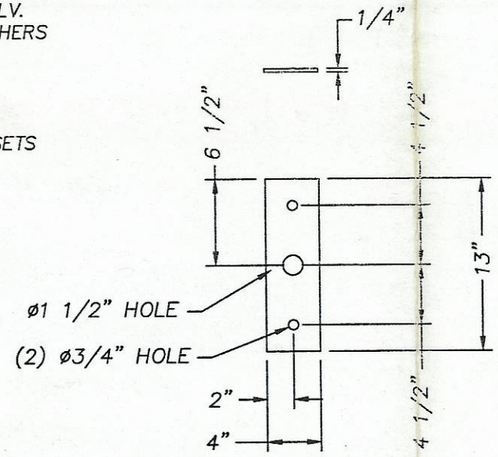




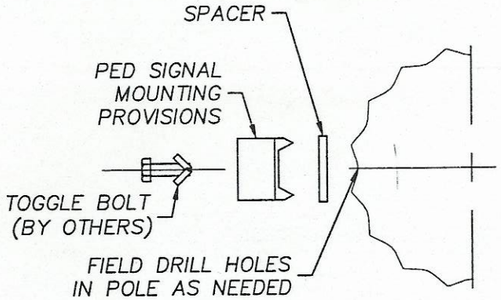
LUMINAIRE ARM CONNECTION DETAIL



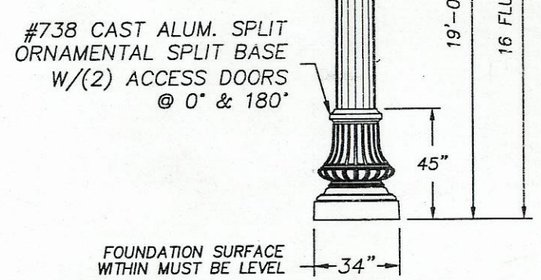
TELESCOPIC FIELD JOINT FOR ARMS OVER 40'-0"



SPACER FOR PED SIGNAL ATTACHMENT 2 PER POLE



PED SIGNAL ATTACHMENT DETAIL @ 9'-0" ELEVATION



MATERIAL SPECIFICATION	
TAPERED TUBES	ASTM-A595 GR.A(55KSI)
PEDESTAL BASE	CAST ALUMINUM AA319F
PLATE & BAR	ASTM-A36
POLE TOP	CAST ALUMINUM-AA319F
STN.STL.HARDWARE	AISI 300 SERIES (18-8)
ANCHOR BOLTS	ASTM-F1554 M105
A.BOLT NUTS	ASTM-A563 GR. A
HANDHOLE FRAME	ASTM-A576
STRUCTURE FINISH	FINISH PAINTED
HARDWARE	H.D.GALV.TO ASTM-A153

DESIGN CRITERIA

DESIGNED IN ACCORDANCE WITH 1994 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" FOR 100 MPH WIND ZONE. STRUCTURES ARE DESIGNED FOR LOADS SPECIFIED BY CUSTOMER AND GENERAL REQUIREMENTS. (CALCULATIONS ON FILE).

REVISIONS

ORNAMENTAL TRAFFIC CONTROL STRUCTURES
CITY OF MYRTLE BEACH, SOUTH CAROLINA
VARIOUS INTERSECTIONS

LOF YES. KB ENG.REF.# ---
REQ.# 0744-40-01 S.O.# N29420 CAD# ---

Union Metal CORPORATION

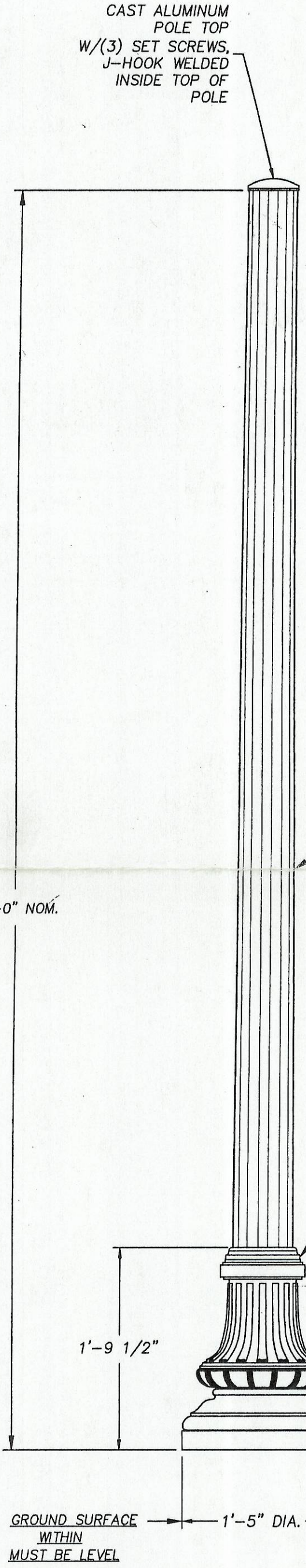
DRAWN WJC
DATE 10-24-01
CHECKED CXC

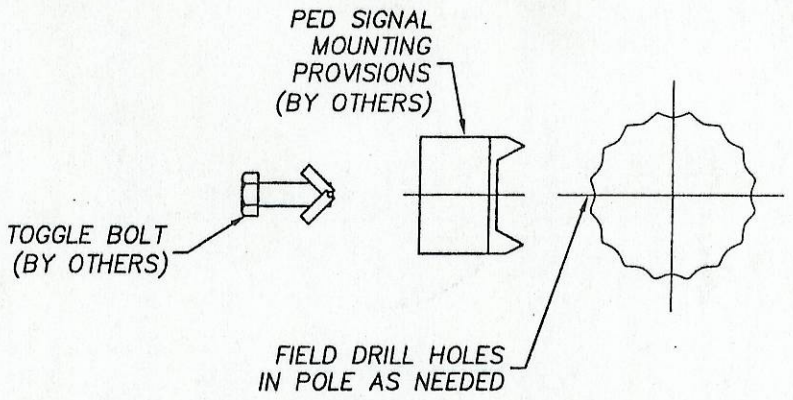
DRAWING NO. 50312-B30
SHT. 1 OF 2

OCEAN BLVD 7-11-02

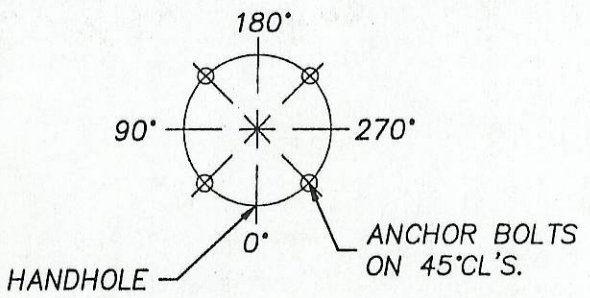
ORIGINAL

TSSP Type Group T-1p – OB Decorative - Pedestrian Poles



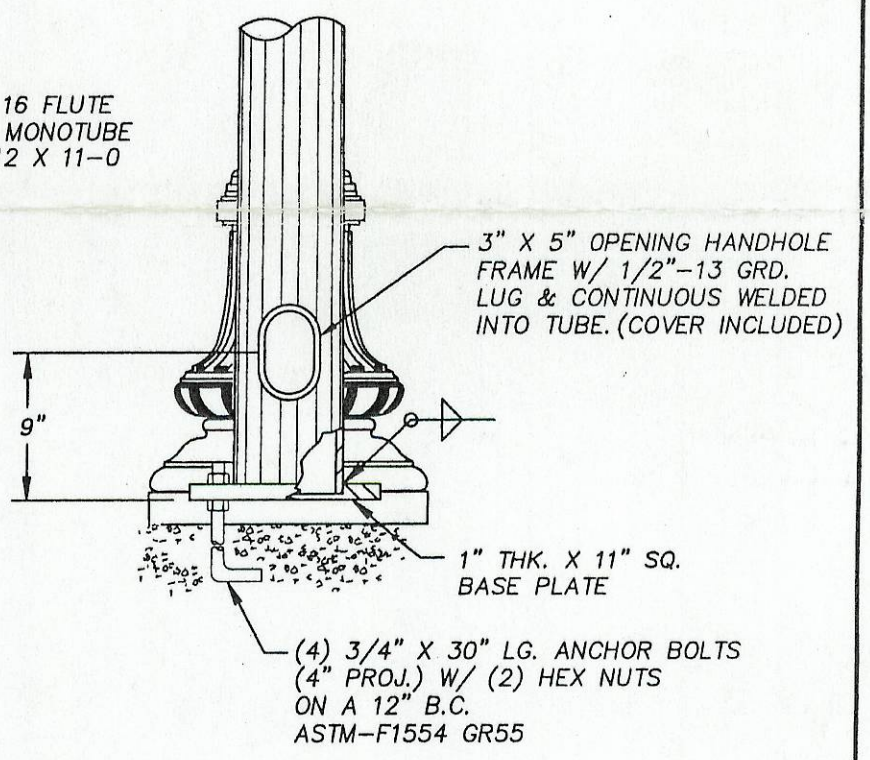


PED SIGNAL ATTACHMENT DETAIL
@ 9'-0" ELEVATION



TOP ORIENTATION VIEW

VALLEY OF FLUTES MUST BE ALIGNED @ 0°



#26 CAST IRON SPLIT PEDESTAL BASE W/ (2) CAST ACCESS DOORS @ 180°

STRUCTURE DESIGNED IN ACCORDANCE W/ AASHTO LTS-1 "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES & TRAFFIC SIGNALS" FOR 90 MPH WIND ZONE WITH 1.3 GUST FACTOR.

FINISH:

1. INSIDE
   a. ONE COAT ENSIGN 197B WAX BASE COATING
2. OUTSIDE
   a. SANDBLAST TO AN SSPC-SP6 COMMERCIAL BLAST.
   b. PRIME 1 COAT TILE CLAD II HI-BUILD PRIMER B62-N71/B60V 70 3 TO 4 MILS D.F.T.
   c. FINISH COAT POLANE POLYURETHANE ENAMEL 1 TO 1.5 MILS D.F.T;
   d. COLOR: PER SALES ORDER

DESIGN NUMBER
B874-26-B126-Y1

SCALE: 1"=1'-0"

ORIGINAL

REVISIONS

ORNAMENTAL PEDESTRIAN POLE
STANDARD
CITY OF MYRTLE BEACH, SOUTH CAROLINA

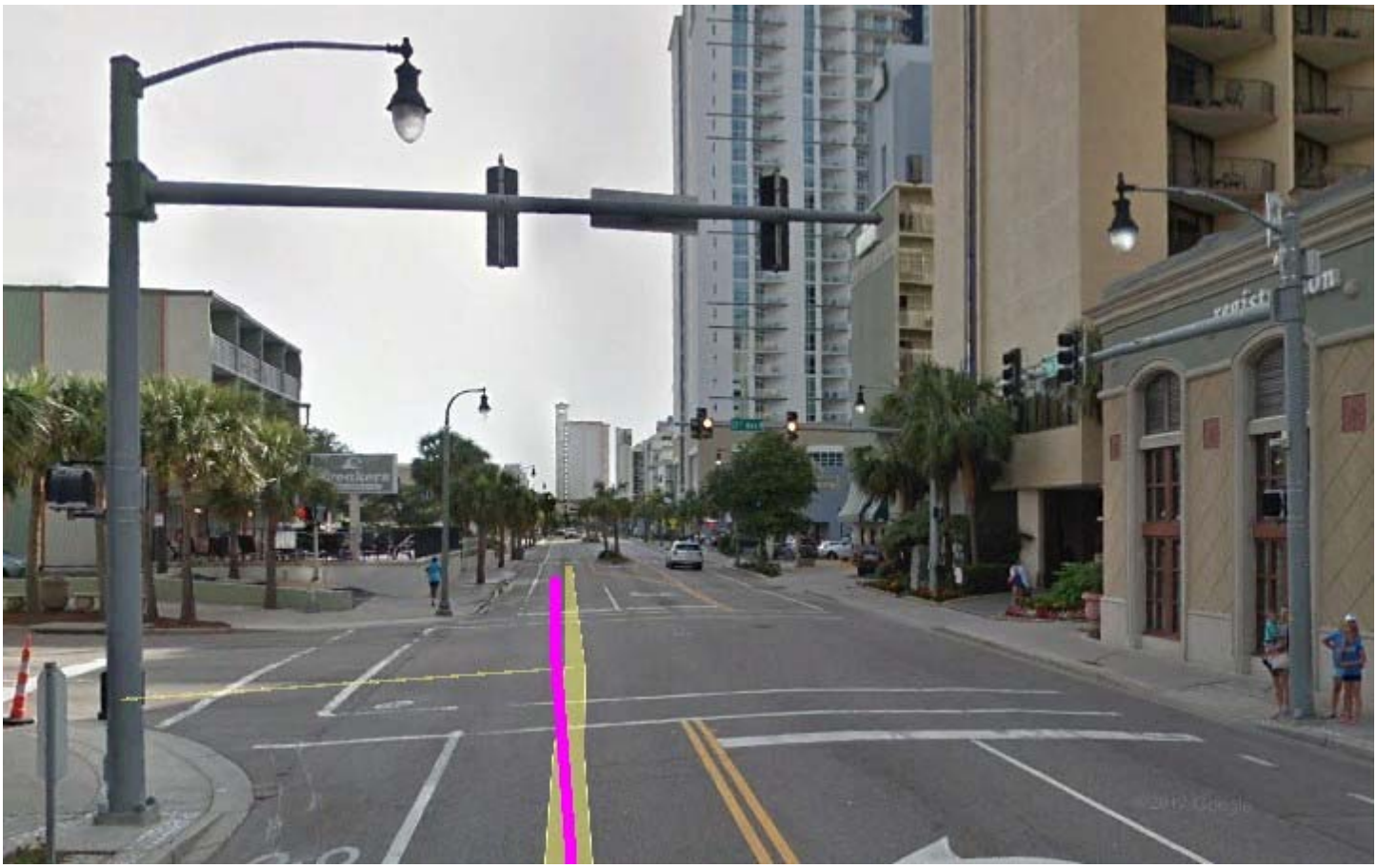
LOF _____ ENG.REF.# N874-26-A58
REQ.# 0744-40-01 S.O.# N29420 CAD# ----

Union Metal CORPORATION

DRAWN WJC
DATE 10-25-01
CHECKED

DRAWING NO.
N874-26-B126

TSSP Type Group T-2 – SCDOT Standard



Example Photo

REFERENCES

TRAFFIC SIGNAL & SYSTEMS ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 14773 M. CAROL JONES 5/9/11

SIGNATURE

#	DATE	CHK	DESCRIPTION
6			
5			
4			
3	05-12-11	PR	ADDED REINFORCING CAGE
2	01-20-10	PR	REVISED
1	11-26-07	WJZ	ADOPTED FROM T/E
0	UNKNOWN	AKF	DRAWN

SCDOT

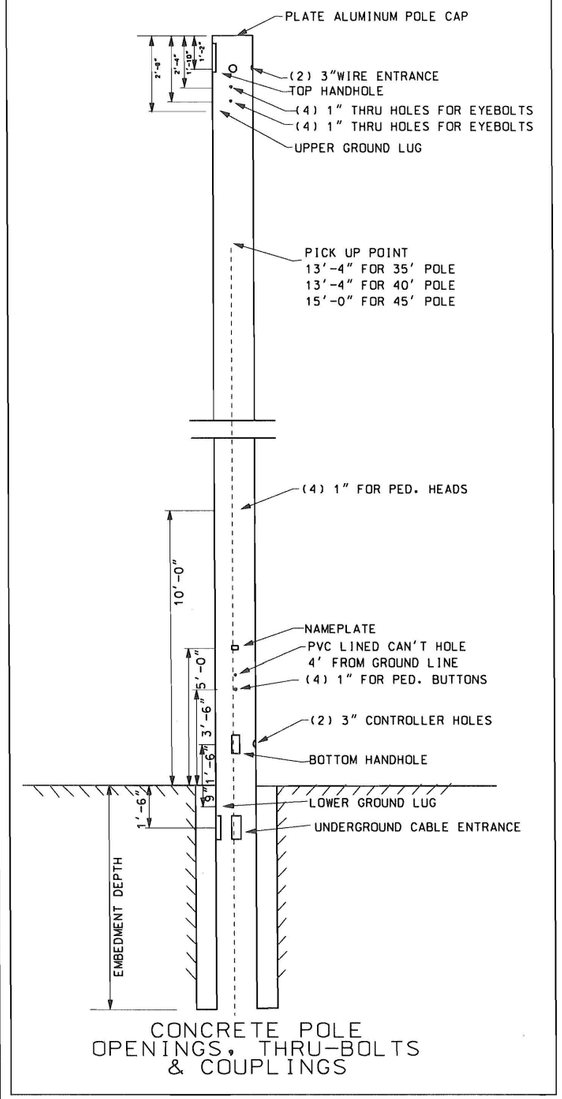
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

POLES

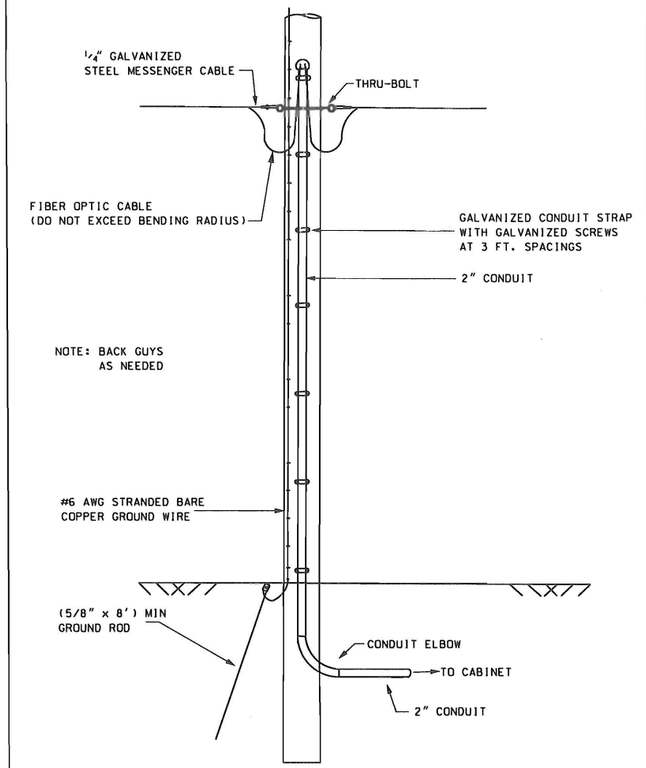
675-115-02

EFFECTIVE LETTING DATE | SEPTEMBER 2011

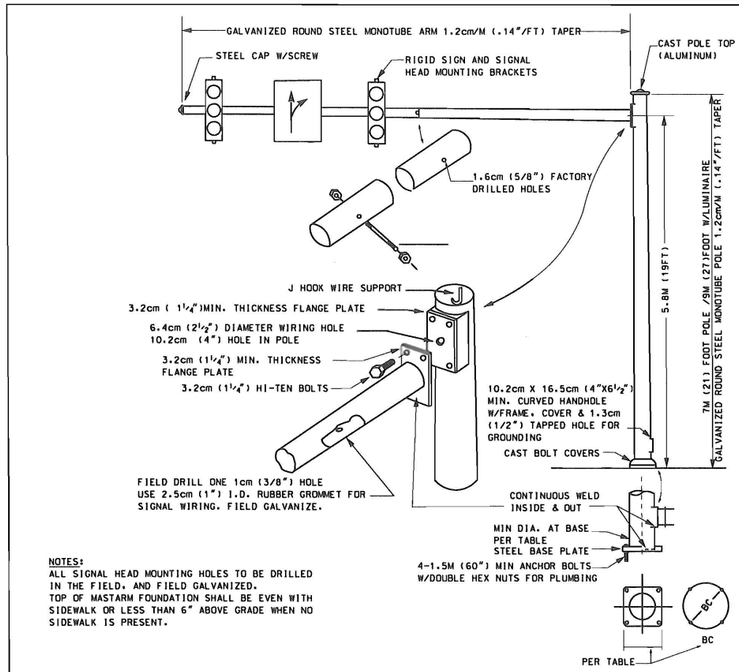


CONCRETE POLE
OPENINGS, THRU-BOLTS
& COUPLINGS

POLE DATA TABULATION SHEET			
POLE LENGTH	35'	40'	45'
TOP HANDHOLE	270°	270°	270°
(2) 3" WIRE ENTRANCES	0°,90°	0°,90°	0°,90°
(4) 1" THRU HOLES FOR EYEBOLTS	0°,90°,180°,270°	0°,90°,180°,270°	0°,90°,180°,270°
(4) 1" THRU HOLES FOR EYEBOLTS	0°,90°,180°,270°	0°,90°,180°,270°	0°,90°,180°,270°
UPPER GROUND LUG	270°	270°	270°
PICK-UP POINT	0°	0°	0°
(4) 1" THRU HOLES FOR PED HEADS	0°,90°,180°,270°	0°,90°,180°,270°	0°,90°,180°,270°
NAME PLATE	0°	0°	0°
CAN'T HOLE	0°	0°	0°
(4) 1" THRU HOLES FOR PED BUTTONS	0°,90°,180°,270°	0°,90°,180°,270°	0°,90°,180°,270°
(2) 3" CONTROLLER HOLES	90°,270°	90°,270°	90°,270°
BOTTOM HANDHOLE	0°	0°	0°
LOWER GROUND LUG	270°	270°	270°
(2) UNDERGROUND WIRE ENTRANCES	0°,270°	0°,270°	0°,270°
OVERALL POLE LENGTH	35'	40'	45'
HEIGHT ABOVE GROUND	27'	30'	34'
EMBEDMENT DEPTH	8'	10'	11'
O.D. @ TOP	11.75"	11.75"	11.75"
O.D. @ BOTTOM	18.05"	18.95"	18.85"
WALL THICKNESS TOP	2.75"	2.75"	2.75"
WALL THICKNESS BOTTOM	3.5"	3.5"	3.5"
FOUNDATION DIAMETER	3'	3'	3'
FOUNDATION DEPTH	8'	10'	11'

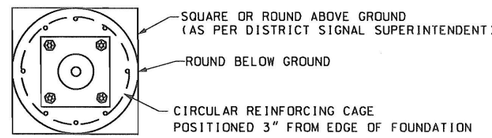


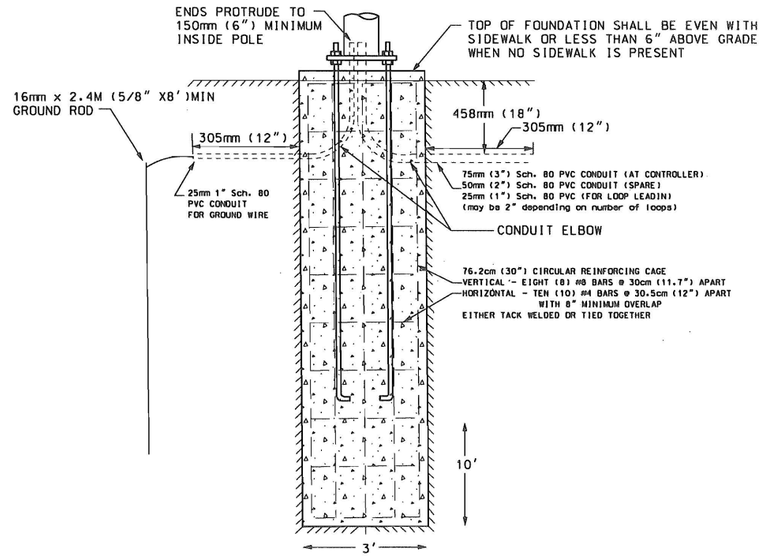
INSTALLATION OF
CONDUIT
ON WOOD POLE



NOTES:
ALL SIGNAL HEAD MOUNTING HOLES TO BE DRILLED IN THE FIELD, AND FIELD GALVANIZED.
TOP OF MASTARM FOUNDATION SHALL BE EVEN WITH SIDEWALK OR LESS THAN 6" ABOVE GRADE WHEN NO SIDEWALK IS PRESENT.

TRAFFIC SIGNAL POLE
WITH MASTARM





TRAFFIC SIGNAL POLE
CONCRETE
FOUNDATION

SCDOT
South Carolina Department of Transportation
Post Office Box 191
Columbia, South Carolina 29202

Attachment E – Design Proposal Checklist

Per section 3.2.3, please complete the attached Design Proposal Checklist and place as a cover page to each design submitted.

City of Myrtle Beach RFP No. 18-R0021
Safe Harbor Design Proposal Checklist/Cover Page

					Ref. RFP Section
Respondent Short Form Name:					3.2.1
Date Submitted:					
Design Number:		of		designs being submitted with this RFP response	

For Streetlight or TSSP Type Group No.:		(List, from Attachment C or D; enter "N/A" for Alternative Structure)

If not for all Target Areas covered by this RFP, list Target Area(s) intended:		Attachment C

If for a single specific location, describe:	

Proposed Design For: (**X** appropriate boxes)	Attachment to Pole:		2.1
		Streetlight Pole	5.1
		TSSP	5.1
	Replacement Pole:		2.1
		Streetlight Pole	5.1
		TSSP	5.1
	Alternative Structure		2.1
		New	5.1
		Replacement	5.1

Design Details Included: (**X** appropriate boxes)		Providers Accommodated	5.4.1
		Aesthetics	5.4.2
		Physical Dimensions, Weight	5.4.3
		Structural Viability Statement	5.4.4
		(P.E. Opinion Letter?)	5.4.4
		RAN Accommodation Detail	5.4.5
		Small Cell Technologies Accommodated	5.4.5.1
		Ground-Mounted Cabinets (state "None" if none)	5.4.5.2
		Underground Vaults	5.4.5.3
		Access Antenna Systems	5.4.5.4
		Wireless Transport (state "None" if none)	5.4.5.5
		Cabling	5.4.5.6
		Utilities/Backhaul/Fronthaul Connectivity	5.4.5.7
		Potential to Support Other Eqpt. Beneficial to City (state "None" if none)	5.4.6
		Electrical Safety Testing (state "None" if none)	5.4.7
		Proven Use In Field (state "None" if none)	5.4.8
		Limitations on Placement (if any)	5.4.9
		Additional Data? (state "None" if none)	5.5

Comments (if any):